PUBLIC WORKS APPROPRIATIONS, 1958

HEARINGS

BEFORE THE

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS UNITED STATES SENATE

EIGHTY-FIFTH CONGRESS

FIRST SESSION

ON

H. R. 8090

MAKING APPROPRIATIONS FOR CERTAIN AGENCIES OF DEPARTMENT OF THE INTERIOR, AND CIVIL FUNCTIONS ADMINISTERED BY THE DEPARTMENT OF THE ARMY, FOR THE FISCAL YEAR ENDING JUNE 30, 1958, AND FOR OTHER PURPOSES

BUREAU OF RECLAMATION AND DEPARTMENT OF THE INTERIOR POWER MARKETING AGENCIES

Printed for the use of the Committee on Appropriations

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DEPOSITED BY THE
UNITED STATES OF AMERICA

PUBLIC WORKS APPROPRIATIONS, 1958

THURSDAY, JUNE 13, 1957

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to call, in room F–82, the Capitol, Hon. Carl Hayden (chairman of the subcommittee) presiding.

Present: Chairman Hayden and Senators Knowland and Dworshak.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENTS OF FRED G. AANDAHL, ASSISTANT SECRETARY, WATER AND POWER DEVELOPMENT; SIDNEY D. LARSON, DIRECTOR, DIVISION OF BUDGET AND FINANCE

TOTAL BUDGET ESTIMATE

Chairman HAYDEN. The committee will be in order.

This morning we begin the hearings on the requests of the Bureau f Reclamation and the Power Marketing Agencies of the Department of the Interior for fiscal year 1958. The budget estimate for these agencies total $237,548,000, which is an increase of $14,510,500 over the amount appropriated for the current fiscal year.

Secretary Aandahl, we will be pleased to hear from you. If you have a prepared statement, you may read it.

GENERAL STATEMENT

Mr. AANDAHL. Mr. Chairman, I have a prepared statement, that I would like to read.

It is a pleasure to appear before this committee to present the fiscal year 1958 programs for the Bureau of Reclamation and Power Marketing Agencies of the Department of the Interior. The conservation and development of our water resources is one of the most important programs of the Federal Government. Each year we are reminded of the devastating effects of floods, as well as droughts. The purpose of the programs of the Department of the Interior is to make usable those natural resources for irrigation and power to provide for the further development of our agricultural and industrial economy. The programs for fiscal year 1958 are based on economical rate of construction of existing projects and for the initiation of several reclamation projects. The power transmission facilities included in

the budget are timed to be completed to market power which is scheduled to come into production.

BUREAUS AND AMOUNTS INCLUDED

The estimates of appropriation requirements submitted for your consideration include the following bureaus and the amounts:

Bureau of Reclamation	$199,312,000
Bonneville Power Administration	33,772,000
Southwestern Power Administration	2,525,000
Southeastern Power Administration	1,939,000
Total	237,548,000

After subtracting civil-service retirement costs, which are included in these estimates for the first time (as required by law), the request for 1958 represents an increase over appropriations for 1957 of $10,078,660.

The officials of these agencies will appear before you to discuss the details of the programs. I will restrict my remarks to the major program objectives.

BUREAU OF RECLAMATION

GENERAL INVESTIGATIONS

Our request for the general investigation activities of the Bureau for fiscal year 1958 is $5,932,000. After deduction of civil-service retirement costs, this estimate is slightly less than the amount appropriated for current fiscal year.

The general investigations program of the Bureau of Reclamation is the foundation on which we base our recommendations for water resource development in the 17 Western States.

Proper evaluation of projects being considered for authorization cannot be made by the Congress unless full information is developed on the need, feasibility and cost of the projects under consideration.

Our estimate of requirements for fiscal year 1958 are geared to a pattern of investigations which will permit us to recommend to the Congress projects which we consider best suited to the needs of the local and national economy.

RETENTION OF ENGINEERING PERSONNEL

Chairman HAYDEN. In times past, when cuts have been made in this appropriation, it has seriously affected the organization because you did not have adequate funds to retain trained personnel. I consider the Bureau of Reclamation and the Corps of Engineers as two great engineering organizations. You have to keep them at fairly constant levels if you are going to retain these engineers. You cannot discharge a man one year and hire him back the next, particularly in view of the demand for engineers in private industry.

Are you having any trouble in retaining engineers in the Bureau?

Mr. AANDAHL. I think probably the Bureau should speak more specifically about that. There is always a problem to retain competent help, because they are in demand, and they have numerous opportunities.

I think we are getting along reasonably well, but it is a problem.

Chairman HAYDEN. You think, though, that you are fully justified in maintaining about the level this year that we had last year?

Mr. AANDAHL. Yes, I do. And there is a volume of work that justifies a staff of about that size.

CONSTRUCTION AND REHABILITATION

The estimate for this appropriation is $135,658,000. The appropriations for 1957 totaled $143,975,500.

The Bureau's construction estimates are likewise geared to carrying out in an orderly and efficient manner a program which will contribute the greatest benefits to those areas where water resources development is badly needed. The major portion of the funds requested will be utilized in financing work underway.

More than three-fourths of the funds requested for 1958 will be for nine major developments: Central Valley, Santa Maria and Ventura projects in California; Rogue River project, Talent division, Oregon; Weber Basin project, Utah; Columbia Basin project, Washington; Glendo unit, Wyoming; Helena Valley unit, Montana; and additions to the electric power transmission system in the Missouri River Basin.

On the Central Valley project the development on the Trinity River is well underway. We are concentrating on the dams and facilities which will provide for storage of water for irrigation and power. The manner of the development of the power facilities on the Trinity River, whether by Federal or non-Federal interests, has been under study in the Department for some time and is also being studied by the legislative committees.

Work is continuing on units of the Missouri River Basin project which will provide water for irrigation and power and on transmission lines which will carry federally generated power to load centers. The Glendo unit for river regulation and production of power, and the Helena Valley unit, an irrigation and municipal water development, are well on the way to completion.

The estimate includes funds for the initiation of construction of 3 projects and 3 units of the Missouri River Basin project, all of which are for irrigation development. They are the Wapinitia project, Oregon; Crooked River project, Oregon; Little Wood River project, Idaho; Missouri River Basin project: Ainsworth unit, Nebraska, Farwell unit, Nebraska, Shoshone extensions unit, Wyoming.

And I would like to add, Mr. Chairman, that there is some question about local interest in this Shoshone extension, and the Bureau of Reclamation witnesses will give you more detailed information about that.

UPPER COLORADO RIVER BASIN FUND

We are requesting $25,142,000 for the upper Colorado storage project, an increase of $11,734,000 over the amount appropriated in fiscal year 1957, after subtracting civil-service retirement costs.

Construction is underway on the three authorized storage units of the Colorado River storage project. The major contract for the Glen Canyon Dam has been let, incidentally, one of the largest in Reclamation's history. With the funds included in this budget, prime contracts will be let for the construction of storage dams on the Flaming Gorge and Navajo units.

Advance planning work on the Curecanti unit of the storage project will continue, leading to a report to the Congress in accordance with the provisions of Public Law 485. We will also continue our planning work on the authorized participating projects and anticipate completion of reports on several of them in the coming fiscal year.

The record of accomplishments of the Bureau of Reclamation in the field of construction over the years can be summed up briefly by reciting these simple statistics. By the end of fiscal year 1958 the Bureau will have completed work on irrigation facilities which will serve full and supplemental water to 8,532,100 acres and on power facilities with a total installed generating capacity of 5,162,000 kilowatts.

OPERATION AND MAINTENANCE

The estimate for operation and maintenance is $28,338,000. This is approximately the same amount as was appropriated in fiscal year 1957, after giving effect to retirement costs.

The responsibilities of operation and maintenance of Bureau-constructed facilities increase each year with the addition of irrigation and power systems being placed in service. The additional financial requirements to meet these added responsibilities is offset somewhat by the turning over of irrigation systems to water users for operation and maintenance upon completion of the facilities, reserving to the Bureau the operation and maintenance of the joint facilities.

BONNEVILLE POWER ADMINISTRATION

The budget request for fiscal year 1958 for the Bonneville Power Administration is $33,772,000, of which $25,142,000 is for construction, and $8,630,000 is for operation and maintenance, representing increases over fiscal year 1957 of $6,017,000 and $670,000 respectively, after adjusting for civil-service retirement costs. The estimate provides for the initiation and continuance of the construction of transmission facilities which are required to meet the increased loads in the area and to provide outlets for additional Federal and non-Federal generating capacity which is scheduled.

The transmission of power of non-Federal generating agencies is to be provided for by wheeling over the Bonneville Power Administration system. The Congress in the past has taken cognizance of the principles of integration and wheeling where Federal and non-Federal systems are providing service in the same general areas. The Bonneville Power system is the major high-voltage power transmission system in the Pacific Northwest. The utilization of this system by integration with other systems will result in much greater economy and effective power distribution than can be accomplished by individual systems. It makes possible bringing in new power sources to the area which would be uneconomical if long individual transmission systems were required. Essentially, power from these new sources does not go directly to the load center for which the installation is made. Integration of the additional power into the system takes place. Power is then supplied by displacement which, when properly planned, will result in reducing distances of transmission from any given power source to its point of utilization. The results are a reduction in losses due to transmission, and in certain cases, fewer transmission system additions, which would otherwise be required for independent service.

Full integration makes it possible to utilize all sources of energy for electric power over a wide area and more effectively utilizes the capacity of each plant in the production of firm power. The estimate for fiscal year 1958 provides for the initiation of construction of two transmission lines to serve this purpose.

The operation and maintenance estimate of $8,630,000 will provide for a safe and proper operation of the Government's transmission system in accordance with accepted utility practices.

The Administration is a major supplier of power to publicly owned and privately owned utilities, and serves industrial customers whose processes require a continuous supply of electric energy. As such it has a service responsibility which makes it mandatory that its operation and maintenance be conducted in a manner to insure continuity of service. The funds requested in this budget for operation and maintenance will provide this service.

By the end of fiscal year 1958, the Administration will be operating and maintaining 6,873 structural miles of transmission lines, 185 substations, and will be supplying power to customers at 342 points of delivery on the system.

SOUTHWESTERN POWER ADMINISTRATION

Construction funds in the amount of $1,480,000 are requested this year for the Southwestern Power Administration to provide for a transmission line to interconnect Table Rock Dam, currently under construction by the Corps of Engineers, with the transmission facilities of the Administration. In line with the Department's responsibilities of marketing power generated at corps projects, facilities to transmit this power to market must be undertaken at this time to meet the scheduled date for completion of Table Rock Dam in fiscal year 1960.

The estimate for operation and maintenance of Southwestern's transmission system is $1,045,000. This is the same amount appropriated for 1957 after adjusting for retirement costs.

CONTINUING FUND

Also included in this budget is $5 million for appropriation to the continuing fund of receipts from sale of power. This is a decrease of $1,400,000 from the 1957 appropriation. The provision in the amended contracts with the generating and transmission cooperatives for settlement of accounts on a net balance basis accounts for this reduction in fund requirements for fiscal year1958.

SOUTHEASTERN POWER ADMINISTRATION

The estimate for operation and maintenance of Southeastern Power Administration is $1,939,000, an increase of $47,000 over the appropriation for fiscal year 1957, after adjusting for retirement costs. The Administration markets power generated at Federal dams in the southeastern area through transmission lines owned by others. This year's estimate will provide for the normal system operation and maintenance, the payment of wheeling fees and purchase of firming energy under existing contracts with private utilities in the area, and for the administration of contracts for the sale of power to public bodies,

cooperatives, the Tennessee Valley Authority and private utility companies.

It is not necessary for me to point out to the members of this committee the fact that, with the exception of general administrative expenses for the Bureau of Reclamation and amounts allocated to such nonreimbursable functions as flood control, fish and wildlife and recreational developments, the appropriations made to the Department of the Interior for public works are all returned to the United States Treasury. During fiscal year 1958 we estimate that the activities engaged in by the Bureau of Reclamation and the power marketing agencies of the Department will produce net receipts of $163,428,860 all of which will be deposited in the Treasury.

This is tangible evidence of what can happen with proper control and utilization of the water resources of this country. Much has been done. Much remains to be accomplished. We are moving forward at as rapid a pace as careful planning and efficient construction practices permit.

That is my statement, Mr. Chairman.

Chairman HAYDEN. Thank you for your statement, Mr. Secretary.

Mr. AANDAHL. Thank you, Mr. Chairman.

RECEIPTS AND TRUST FUNDS DEPOSITED IN TREASURY

Chairman HAYDEN. I will include in the record at this point a statement of revenues deposited in the Treasury by the Bureau of Reclamation and the power marketing agencies of the Department.

It is interesting to note that in fiscal year 1956 the actual net receipts of these agencies totaled $134,932,964, the estimate for the current year is $151,002,897; and the estimate for fiscal year 1958 is $163,428,800.

(The statement referred to follows:)

Estimated and actual miscellaneous receipts and trust funds deposited in the Treasury of the United States for fiscal years 1956, 1957, and 1958

Item	1956 actual	1957 estimate	1958 estimate
Interest on and repayments to Colorado River Dam fund and other funds	$3,804,208	$4,102,700	$4,101,500
Revenues from Colorado River Dam fund project	5,242,991	5,618,700	5,618,700
Collections, Reclamation fund:			
Bureau of Reclamation	11,999,384	15,436,600	15,616,200
Power revenues	43,711,478	46,825,400	50,672,300
Subtotal, collections, reclamation fund	[1] 55,710,862	[2] 62,262,000	[3] 66,288,500
Collections, Colorado River Development fund	506,948	501,000	501,000
Sale of Bonneville power	59,274,075	66,250,000	73,050,000
Sale of Southeastern power	12,928,963	15,842,050	18,526,000
Sale of Southwestern power	8,357,630	7,137,000	6,360,000
Sale of Fort Peck power	1,954,934	1,840,278	2,159,200
Sale of Eklutna, Alaska, power	1,142,199	1,507,000	1,546,600
Sale of Falcon Dam, Tex., power	223,912	495,000	345,000
Sale of public lands, buildings, and other property	557,214	525,000	400,000
Unclassified receipts	205,461	228,000	277,500
Gross receipts, general and special funds	149,909,397	166,308,728	179,174,000
Less duplication [4]	16,317,000	16,355,000	16,384,000
Net receipts, general and special funds	133,592,397	149,953,728	162,790,000
Trust funds	1,340,567	1,049,169	638,800
Gross receipts, all funds	151,249,964	167,357,897	179,812,800
Net receipts, all funds	134,932,964	151,002,897	163,428,800

[1] Excludes $35,558,289 collected by the Bureau of Land Management but deposited to "Collections, reclamation fund."
[2] Excludes $39,914,200 collected by the Bureau of Land Management but deposited to "Collections, reclamation fund."
[3] Excludes $42,211,500 collected by the Bureau of Land Management but deposited to "Collections, reclamation fund."
[4] Receipts duplicated are as follows:

Item	1956 actual	1957 estimate	1958 estimate
Receipts from sale of power generated at Bureau of Reclamation projects included in "Collections, reclamation fund" and "Sale of Bonneville power"	$16,317,000	$16,355,000	$16,384,000

AUTHORIZED POSITIONS

Chairman HAYDEN. A statement of authorized positions for agencies included in this portion of the bill will be included in the record.

(The statement referred to follows:)

Bureau or office and appropriation title	Authorized, 1957			Estimated, 1958			Change (+) or (−)		
	Permanent positions	Full-time equivalent other positions	Total	Permanent positions	Full-time equivalent other positions	Total	Permanent positions	Full-time equivalent other positions	Total
SOUTHEASTERN POWER ADMINISTRATION									
Operation and maintenance	39		39	39		39			
SOUTHWESTERN POWER ADMINISTRATION									
Construction	6		6	20	1	21	+14	+1	+15
Operation and maintenance	141	8	149	138	8	146	−3		−3
Total, Southwestern Power Administration	147	8	155	158	9	167	+11	+1	+12
BONNEVILLE POWER ADMINISTRATION									
Construction	1,220	55	1,275	1,196	31	1,227	−24	−24	−48
Operation and maintenance	950	15	975	1,026	16	1,042	+66	+1	+67
Total, Bonneville Power Administration	2,180	70	2,250	2,222	47	2,269	+42	−23	+19
BUREAU OF RECLAMATION									
General investigations	751	24	775	747	29	776	−4	+5	+1
Construction and rehabilitation	6,141	108	6,249	5,739	95	5,834	−402	−13	−415
Operation and maintenance	3,669	77	3,746	3,750	83	3,833	+81	+6	+87
General administrative expenses	468	1	469	471	1	472	+3		+3
Upper Colorado River Basin fund	1,060	30	1,090	1,540	47	1,587	+480	+17	+497
Total, Bureau of Reclamation	12,089	240	12,329	12,247	255	12,502	+158	+15	+173
Total, Bureau of Reclamation and power marketing agencies	14,455	318	14,773	14,666	311	14,977	+211	−7	+204
Grand total, Department of the Interior	43,383	4,518	47,901	45,598	4,942	50,540	+2,215	+424	+2,639

SOUTHWESTERN POWER ADMINISTRATION

STATEMENTS OF DOUGLAS G. WRIGHT, ADMINISTRATOR; H. A. HEWETT, ASSISTANT ADMINISTRATOR; AND EARL CONDER, BUDGET OFFICER

General Statement

Chairman HAYDEN. Mr. Wright?

Do you have a prepared statement?

Mr. WRIGHT. Yes, Mr. Chairman, I do, and I believe copies have been furnished the committee.

Chairman HAYDEN. You may proceed, and then we will go into the consideration of the various appropriations.

Mr. WRIGHT. Thank you.

Mr. Chairman and gentlemen of the committee, the budget estimate of the Southwestern Power Administration for its total program in the fiscal year 1958, is $7,525,000.

CONSTRUCTION

The budget estimate for construction is $1,480,000, which includes construction of transmission facilities to interconnect Table Rock Dam with existing facilities at Springfield, Mo; customer connections; acquisition of equipment for delivery of power in emergencies, or pending installation of permanent facilities, and acquisition of general plant and equipment.

OPERATION AND MAINTENANCE

The budget estimate for operation and maintenance is $1,045,000, which will enable the Administration to operate and maintain its transmission system, carry on power marketing negotiations, provide customer services, and administer contracts between the Administration and certain generation and transmission cooperatives.

CONTINUING FUND

The budget estimate for the continuing fund is $5 million, and is requested for the purchase of power and service or wheeling charges, and for the leasing of transmission capacity under contractual agreements with certain generation and transmission cooperatives.

With the committee's permission I would like to discuss some of the phases and details of the overall program, and also submit supporting data concerning same.

Chairman HAYDEN. All right, sir. You may proceed.

Mr. WRIGHT. I believe, Mr. Chairman, that we have 2 main responsibilities, 1, that we have a duty to perform, a property of the Government to dispose of, and, 2, an accounting for the money that the committees of Congress have provided through the Congress for us to carry on this activity.

I have a number of exhibits which I would like to put into the record one at a time, but I will hand sets of these exhibits to you. They are summaries, which will disclose this information.

JUSTIFICATIONS

Chairman HAYDEN. I think at this time we will insert the budget estimate for construction, which amounts to $1,480,000. The justifications will be printed in the record.

(The justifications referred to follow:)

Analysis by activities—Construction

Activities	Adjusted appropriation	Estimate, 1958
1. Construction in progress	None	None
2. New construction and additions	None	$1,480,000
Total	None	1,480,000

Program summary, fiscal year 1958

Activity and project	Estimated cost	Program, fiscal year 1958
NEW CONSTRUCTION AND ADDITIONS		
Plant interconnection project:		
Table Rock-Springfield line, 154 kilovolts	$900,000	$900,000
Springfield substation addition	100,000	100,000
Subtotal	1,000,000	1,000,000
Miscellaneous projects:		
Anadarko, transformer	55,000	55,000
Bentonville switching station	45,000	45,000
Mobile unit substations	225,000	225,000
Subtotal	325,000	325,000
General plant and equipment	35,000	35,000
Administration and engineering	120,000	120,000
Total	1,480,000	1,480,000

Justification, new construction and additions—I. Plant interconnection project

Project	Estimated cost	Program fiscal year 1958
Table Rock-Springfield line, 154 kilovolts	$900,000	$900,000
Springfield substation addition	100,000	100,000
Total	1,000,000	1,000,000

The estimate of $1 million for this project provides for the construction of a proposed 154-kilovolt transmission line, approximately 42 miles in length, from Table Rock Dam to Springfield, Mo., together with the necessary facilities to interconnect with the Table Rock Dam substation, which is being constructed by the Corps of Engineers. The estimate also provides for additional facilities at the Administration's Springfield, Mo., substation for termination, control and fault protection of the proposed transmission line.

Recent calculating board studies of the existing transmission lines in the Missouri area indicated that with the projected loads for 1960, these transmission lines would not have sufficient capacity to carry the power generated at the Table Rock Dam to load centers in the Missouri area. The Table Rock project is scheduled for completion in the early part of fiscal year 1960. Due to these circumstances, it is essential that the proposed line and related facilities be constructed in order for the Administration to market and deliver the power generated at the Table Rock Dam to load centers, through interconnection with the Administration's transmission facilities at Springfield, Mo.

II. Miscellaneous projects

Project: Anadarko, transformer:
Estimated cost $55,000
Program, fiscal year 1958 55,000

Power and energy has been delivered by the Administration to the city of Anadarko since April 1953, over the Western Farmers Electric Cooperative transmission lines, and through their Anadarko 69–12.5/7.2-kilovolt substation. This cooperative's load is increasing to such an extent that it is contemplated by 1958 the greater portion of the surplus capacity of these facilities will be required to serve the cooperative's load, hence the need to provide additional substation capacity to provide for the Administration's customer. The lease contract with Western Farmers Electric Cooperative does not provide for it to furnish facilities for customers of the Administration, but only to make available such surplus capacity in their facilities which may exist from time to time. Therefore it is necessary to acquire one 69–12.5/7.2 kilovolt, 3 phase, 5,000-kilovolt-ampere transformer which will be installed in the Western Farmers Electric Cooperative's substation.

Project: Bentonville switching station:
Estimated cost $45,000
Program, fiscal year 1958 45,000

Negotiations are currently in progress with the Southwestern Gas & Electric Co. on a wheeling and integrating agreement similar to the Oklahoma companies' contract which will provide for the delivery of power and energy over the transmission facilities of this utility to preferred customers in Arkansas. Initial point of interconnection to provide this integration with the Southwestern Gas & Electric system is planned at the Bentonville terminal of our Southwest City-Bentonville 69-kilovolt line. This switching station will require the installation of 69-kilovolt oil circuit breakers, metering transformers, and the necessary control and telemetering equipment. The amount requested is estimated to be about 50 percent of the cost of the switching station. It is anticipated that the Southwestern Gas & Electric Co. will furnish the other 50 percent of the cost

Project: Mobile unit substations:
Estimated cost $225,000
Program, fiscal year 1958 225,000

The estimate of $225,000 for this project provides for the acquisition of 2 mobile unit substations, 69 kilovolt to 7.2/12.5 or 2.4/4.16 kilovolt, 3,000 kilovolt-amperes. These mobile units will make it possible to perform emergency and routine maintenance on transformers, oil circuit breakers and substation equipment without interrupting customer service. These units will also permit the delivery of power and energy to customers under emergency conditions, or upon short notice, pending the acquisition or construction of permanent facilities.

III. General plant and equipment

Estimated cost $35,000
Program, fiscal year 1958 35,000

The estimate of $35,000 provides for the acquisition of materials and supplies for use in maintenance of the transmission system such as poles, conductor, crossarms, hardware and other maintenance items. The estimate also provides for the purchase of trucks, tractors and other mobile equipment used in operation and maintenance of the transmission system.

IV. Administration and engineering

Estimated cost $120,000
Program, fiscal year 1958 120,000

This estimate covers the cost of personal services, travel, and other expenses in connection with carrying out the construction program for the fiscal year 1958. This amount includes $5,000 for civil-service retirement costs.

Total new construction and additions, $1,480,000.

Appropriations

1950	$3,475,000	1954	None
1951	8,620,000	1955	None
1952	3,375,000	1956	None
1953	4,150,000	1957	None

Itemization of estimate—Construction

	Estimate, 1957	Estimate, 1958
Program and financing: Appropriation	$1,052,109	$1,480,000
Obligations by objects:		
01 Personal services	32,500	95,000
02 Travel	4,500	12,000
03 Transportation of things	1,000	1,000
04 Communication	400	400
05 Rentals and utility service	100	100
06 Printing and reproduction	100	100
07 Other contractual services	56,000	10,000
08 Supplies and materials	7,509	5,400
09 Equipment	559,000	451,000
10 Lands and structures	391,000	900,000
11 Grants, subsidies, and contributions: Contributions to retirement fund		5,000
Total obligations	1,052,109	1,480,000

TOTAL APPROPRIATIONS FOR CONSTRUCTION

Mr. WRIGHT. The first item I would like to put in the record, Mr. Chairman, is an item which shows what we have done with all of the money that Congress has given us since we started. That very brief summary shows that we have appropriated for construction by the Congress up to this time $27,120,000. Out of that we have made savings in construction costs and have returned to the Treasury $2,219,830.

Chairman HAYDEN. That statement may be included in the record.

(The statement referred to follows:)

Construction appropriations (net):		
Appropriations, 1947–57		$27,120,000
Transferred, rescinded, and returned to Treasury		−2,219,830
Net appropriations		24,900,170
Operation and maintenance appropriations (net):		
Appropriations, 1944–57		11,781,712
Transferred and returned to Treasury	$1,909,838	
Unobligated portion of this balance to be returned to Treasury	349,273	
		2,259,111
Total		9,522,601

1957 FISCAL YEAR APPROPRIATIONS—ESTIMATED OBLIGATIONS, CARRYOVER BALANCE, AND SAVINGS

Construction:	
1957 carryover balance	$1,052,108
Estimated obligations	1,052,108
Estimated carryover balance, 1958	0
Operation and maintenance:	
1957 appropriation	1,000,000
Estimated obligations	900,000
Estimated savings	100,000
Continuing fund:	
1957 appropriation	6,400,000
Estimated obligations	5,200,000
Estimated savings	1,200,000

TOTAL OPERATION AND MAINTENANCE FUNDS

Mr. WRIGHT. We have had appropriated for operation and maintenance cost since our inception $11,781,712. We have been able to effectuate savings in that in the amount of $2,259,111; $1,909,838 has been returned to the Treasury or transferred to other agencies within the Departments; the remaining $349,273 will be returned to the Treasury at the end of the current fiscal year.

We have operated our construction program about 8 percent below the appropriations, and our operation and maintenance program some 20 percent below.

Last year's appropriation: We had no construction appropriation, but the carryover balance will or has been completely utilized. There was appropriated $1 million for operation and maintenance, and we expect to effectuate a saving of $100,000, which will be returned to the Treasury.

The "Continuing fund" appropriation of $6,400,000—there was expended from that $5,200,000, and we estimate a saving there of $1,200,000, primarily because we got the amended contracts in operation soon enough to put this balancing of accounts into effect. We feel that that record would indicate to the committee that Southwestern Power Administration will operate as economically as possible, whether or not it has funds provided for it, perhaps, in excess of what it may find to be necessary.

In operating a power business, when you put in a budget you must assume that certain emergency and other detrimental conditions might occur, and you must make provisions for them. If you can duck them or dodge them, then you are able to effectuate savings, and our record has been consistent in that.

Chairman HAYDEN. You always feel safer with a little slack.

Mr. WRIGHT. That is correct, sir. There is no other way to run a power business. We have had, I believe, about five times as many tornadoes as we have ever had in the history of the Southwest before. We had one line hit. We might have had 50 lines hit. We were just lucky. Last year before this committee we had a 40-percent storage in our reservoirs. This year we have anywhere from 25 to 50 feet of water above the top of the power pool in every reservoir.

Chairman HAYDEN. That is a welcome change.

Mr. WRIGHT. A very welcome change. As late as February of this year, a very eminent Army engineer was pooh-poohed in Tulsa when he said there could be a flood on the Arkansas this year. They have moved part of the city of Tulsa out several times because of the floods this year.

SALE OF POWER

The next item I would like to put in the record shows very briefly the disposition of all the Government property we have ever sold in that area, the Government property being hydroelectric power. We have sold a total of 5,878,000,000 kilowatt-hours (in round numbers) of hydroelectric power. Of that, 1,548 million was secondary power. The total primary power was 4,329 million. For that we have received an average rate of 6.12 mills. We have served out of that to preferred customers 2,568 million kilowatt-hours, or about 60 percent.

Chairman HAYDEN. Those statements will be included in the record.

(The statements referred to follow:)

Total kilowatt-hour sales and revenue, fiscal year 1945 through fiscal year 1956

	Kilowatt-hours	Revenue	Mills/kilowatt-hour average on Government transmission grid
Total hydroelectric power and energy sales	5,878,678,638	$28,383,310.20	
Less secondary hydroelectric sales	1,548,886,329	1,904,318.66	1.23
Total hydroelectric primary sales	4,329,792,309	26,478,991.54	6.12
Purchased and withdraw power	962,271,535		
Total all firm sales	5,292,063,844	31,488,776.86	5.95
Total sales to preferred customers, firm	2,568,429,612	14,263,420.50	5.55
Total sales to companies, firm	2,723,634,232	17,225,356.36	6.32
Less aluminum contract sales, firm	682,346,900	3,548,203.88	5.20
Total other company sales, firm	2,041,287,332	13,677,152.48	6.70

Summary of total sales to preference customers served direct by Southwestern Power Administration

	Total kilowatt-hours
Kilowatt-hour sales:	
G and T cooperatives (except Whitney)	1,151,690,886
Other preference customers	389,510,566
Total	1,541,201,452
Revenue:	
G and T cooperatives (except Whitney)	$6,206,760.87
Other preference customers	2,125,177.85
Total	8,331,938.72
Average rate, mills per kilowatt-hour	(5.41)
Purchased power (G and T):	
Kilowatt-hour	815,218,857
Amount	$4,774,782.06
Average cost, mills per kilowatt-hour	(5.86)
Service charge (G and T): Amount	$844,249.91
Lease payments (G and T):	
Amortization	$1,443,803.08
Administration	255,846.41
Total	1,699,649.49
Operation and maintenance (G and T):	
Operation	187,762.44
Maintenance	94,704.13
Replacements	3,197.57
Total	285,664.14
Whitney Dam project: [1]	
Kilowatt-hour sales	99,030,966
Revenue	$531,953.32
Average rate, mills per kilowatt-hour	(5.37)

[1] Power and energy generated at Whitney Dam project prior to June 1, 1955, was incidental to release of water for testing and downstream water uses and sold accordingly.

Summary of total sales to utility companies by contract

	Texas Power & Light Co.		Oklahoma Utility Cos.	
	Prior to contract No. 177	Under contract No. 177	Prior to contract No. 356	Under contract No. 356
	Kilowatt-hours	*Kilowatt-hours*	*Kilowatt-hours*	*Kilowatt-hours*
Hydroenergy to company:				
Primary energy	283,624,661	712,250,810	163,643,448	442,069,761
Secondary energy	277,370,377	288,784,500	34,791,484	83,731,119
Total energy	560,995,038	1,001,035,310	198,434,932	525,800,880
Continuous available energy from company to Government customers		410,453,417		489,673,608
Revenue:				
Utility companies:				
Gross, total energy	$1,750,471.50	$5,657,166.85	$1,087,324.40	$636,910.18
Less secondary energy	320,584.18	360,980.62	35,948.27	104,663.90
Gross, primary energy	1,429,887.32	5,296,186.23	1,051,376.13	532,246.28
Less purchased power		2,287,312.84		234,241.58
Net revenue before wheeling		3,008,873.39		298,004.70
Government customers		2,257,138.36		2,723,050.58
Total revenue for primary energy on Government transmission grid		5,266,011.75		3,021,055.28
Less wheeling charges				612,092.06
Total revenue for primary energy delivered to Government customers and retained by companies		5,266,011.75		2,408,963.22
Average rate/kilowatt-hours received for primary energy on Government transmission grid		[1] 7.39		[1] 6.83
Average rate/kilowatt-hours companies paid for primary energy retained	[1] 5.04	[1] 9.97	[1] 6.42	([2])
Average rate/kilowatt-hour paid by Government customers		[1] 5.50		[1] 5.56
Rate/kilowatt-hours received for secondary energy	[1] 1.16	[1] 1.25	[1] 1.03	[1] 1.25

[1] Mills.
[2] None retained.

Summary of total sales to utility companies by contract—Continued

	Southwest Gas & Electric Co.		Arkansas Power & Light Co.	
	Prior to contract No. 396	Under contract No. 396	Except aluminum contract	Under aluminum contract
	Kilowatt-hours	*Kilowatt-hours*	*Kilowatt-hours*	*Kilowatt-hours*
Hydro energy to company:				
Primary energy	12,912,350	92,550,450	1,178,555,826	682,346,900
Secondary energy	5,513,600	77,413,220	686,429,929	32,688,300
Total energy	18,425,950	169,963,670	1,864,985,755	715,035,200
Continuous available energy from company to Government customers		92,942,772		
Revenue:				
Utility companies:				
Gross, total energy	$93,695.64	$1,104,715.44	$7,928,954.12	$3,589,064.26
Less secondary energy	6,892.01	96,766.53	856,944.95	40,860.38
Gross, primary energy	86,803.63	1,007,948.91	7,072,009.17	3,548,203.88
Less purchased power		514,751.09		
Net revenue before wheeling		493,197.82		
Government customers		500,017.34		
Total revenue for primary energy on Government transmission grid		[2] 993,215.16		
Less, wheeling charges		52,871.80		
Total revenue for primary energy delivered to Government customers and retained by companies		940,343.36		
Average rate/kilowatt-hours received for energy on Government transmission grid		[1] [2] 10.73		
Average rate/kilowatt-hours companies paid for primary energy retained	[1] 6.72			
Average rate/kilowatt-hours paid by Government customers		[1] 5.38	[1] 6.00	[1] 5.20
Rate/kilowatt-hours received for secondary energy	[1] 1.25	[1] 1.25	[1] 1.25	[1] 1.25

[1] Mills.
[2] At Government bus.

You will recall that for many years Southwestern Power had no lines, had no way of getting power to preferred customers, and as contractual arrangements were developed with existing utility companies through the years and as lines were built, we think that a record of 60 percent of sale of the power available to customers since the start of this system is literally amazing.

The map hanging on the wall over there is mute testimony to the success of this program in that now the Southwestern Power Administration system is one of the key elements in a 5-million-kilowatt power pool in the Southwest, and in the event of emergency the total power systems in the Southwest would be operated under the control of 2 private utility executives and 2 executives of the Southwestern Power Administration.

We think that the faith and hope that we had dreamed of for integration of the Southwest has come true even to the extent that, in a recent rate consideration, staff members of another Government agency had difficulty understanding the extent of these integrations.

SALES MADE TO PREFERRED CUSTOMERS

I wish to submit for the record without comment, so that the total thing will be available, 3 other sheets, showing the sales that were made to preferred customers, the revenues that were accrued from

it, the sales that were made under each of the utility contracts we have—and we have 4 of those, the Texas contract, the Oklahoma contract, the Southwestern Gas & Electric contract, and the Arkansas Power & Light Co. contract; and we have a new one which I will discuss just a little later on.

We have negotiated new contracts with these companies, which will become effective when the rates now pending before the Federal Power Commission have been confirmed and approved, and all of the exchanges and values between the Government and the companies have been assigned a monetary value, so that everyone can tell whether each fellow is paying the other one, without any trade, which had previously caused some adverse comment.

FEDERAL POWER COMMISSION RATE STUDY

Chairman HAYDEN. When will the Power Commission button this up?

Mr. WRIGHT. I cannot answer as to that. I hope very shortly action will be had on the rates which have been pending over there for a couple of months or more.

When those contracts go into effect, we will receive a return, under the Oklahoma contract, of 8.65 mills per kilowatt-hour for hydro peaking power, 9.2 mills under the Texas contract, and 9.33 mills under the new Southwestern Gas & Electric contract. This is evident in our exchanges throughout, in that benefits from our integration in the Southwest have been shared by the Government. The advantages have been shared by the Government, and the companies, and the Government has been enabled to have a return from the sale of its power much higher than the rate which the preferred customers have had to pay for the power which they got; which is the objective of the total program there.

CONDITION OF RESERVOIRS IN SOUTHWEST

I would like to put in the record at this point this very good news that I mentioned previously; namely, the conditions of the reservoirs in the Southwest. Very briefly, the power pools are all 100 percent full, and all of them are above the power pool, 32 feet at Bull Shoals, 25 feet at Denison, 26 feet at Fort Gibson, 21 feet at the Norfork, 34 feet at Tenkiller, 2 feet at Narrows, 48 feet at Whitney, all above the top of the power pool.

Chairman HAYDEN. That is good news indeed. That statement will be included in the record.

(The statement referred to follows:)

Power storage and potential energy available, June 3, 1957

Project	Power storage		Feet above power pool [1]	Potential energy [2]	
	Acre-feet	Percent of full power pool		Kilowatt-hours	Percent of full power pool
Bull Shoals	2,084,000	100	31.82	299,900,000	100
Denison	1,782,600	100	25.21	144,200,000	100
Fort Gibson	54,000	100	25.78	2,800,000	100
Norfork	707,000	100	20.67	94,400,000	100
Tenkiller	345,000	100	34.11	37,100,000	100
Subtotal	4,972,600	100		578,400,000	100
Narrows	202,180	100	2.04	21,600,000	100
Whitney	131,700	100	48.07	10,100,000	100
Subtotal	333,880	100		31,700,000	100
Total	5,306,480	100		610,100,000	100

[1] Temporary storage in flood-control pool.
[2] Estimated at 85 percent efficiency.

Rainfall, runoff, and streamflow in this area have been excessive for this season of the year. All reservoirs are storing water above the top of the power pool for flood-control purposes with Denison pool elevation 2.21 feet above the uncontrolled spillway crest and a discharge of approximately 22,000 cubic feet per second. Fort Gibson and Tenkiller Ferry flood-control pools are nearly full. Table Rock project, under construction on the White River upstream of Bull Shoals, has temporarily impounded more than 1,900,000 acre-feet with approximately 10 feet of water flowing over the low section of the incomplete structure.

Mr. WRIGHT. We have sold a tremendous amount of secondary power during the last 2 months, and much of that secondary power for the first time has been delivered to preferred customers. They actually shut their plants down, and we were able to deliver a great deal of it to preferred customers rather than having to feed it into existing systems.

Chairman HAYDEN. That must have been a considerable economy to the preferred customers.

PALMYRA, MO., COOPERATIVE

Mr. WRIGHT. Well, I would like to cite one economy. There was a G. and T. cooperative formed many years ago at Palmyra, Mo. This cooperative served some eight distribution cooperatives. It tried to operate independently, with a thermal plant of its own. As of the end of 1955, all of the REA's in the United States had back payments unpaid of $355,000, in the total United States. This cooperative represented $260,000 of that, three-fourths of it nearly.

Since the 1st of January, they have been integrated with us, and as of the 1st day in July they threw their red ink away. They are in the black. So 75 percent of the REA debt of the United States was wiped out in 6 months with integration. They are now in excellent shape and will continue to improve their position very rapidly.

As a matter of fact, one of the interesting things in connection with the integration: The city of Springfield needed some power. Palmyra Co-op had some to sell. We did just what the Secretary spoke of a moment ago. We let them feed power into the north end of the system. We delivered at Springfield. And the net result was that nobody had to deliver power so far and the loss in the

total system was less, by operating in that fashion. That was one of the things that helped pull them out of the red and into the black, by virtue of the fact that they could find markets throughout a large area which they could never have achieved alone.

Chairman HAYDEN. I wish there was some way of adjusting rainfall as well as you made these other adjustments. Because while it is true that you have had an excess in your Oklahoma and Texas areas, we are still short in Arizona.

Mr. WRIGHT. Yes, sir. I think there is a way to adjust it. And that is when we learn that water is the one thing in America that is in limited supply, and that the development of America depends upon her water resources. Last summer at Anadarko, Okla., they were paying 40 cents a gallon for water.

Now, if we can ship crude oil from Texas in pipelines to New York City, I know it does not cost 40 cents a gallon, and we might learn to ship water in pipelines.

ESTIMATE FOR BENTONVILLE LINE

I have one bad piece of news. I always make a point of saying we have made a mistake if we have made one, and we have. For the first time in 15 years before a congressional committee, I have to say that Southwestern Power Administration gave this committee a low estimate last year, and we could not build a line for the estimate we set.

I would like to insert in the record at this point a tabulation of this condition for the Bentonville line.

(The tabulation referred to follows:)

Estimated cost of Southwest City-Bentonville line and Bentonville substation

	Estimate in 1957 hearings	Modified H-frame construction	Regular H-frame construction	Single-pole construction
Southwest City, Bentonville line	$230,000	[1] $277,000	$290,000	$279,000
Bentonville substation	60,000	73,000	73,000	73,000
Total estimates	290,000	350,000	363,000	352,000

[1] Southwest City, Bentonville line:

Preliminary and other costs	$20,000
Land	17,000
Contract	240,000
Total estimated line cost	277,000

Available funds:

Miscellaneous construction funds	$328,000
Savings from other projects	22,000
Total available funds	350,000

CONTRACT WITH SOUTHWESTERN GAS & ELECTRIC CO.

Mr. WRIGHT. This committee last year determined that it would be wise to permit the Government to expend money it already had for the construction of a Bentonville line to serve the city of Bentonville, Ark., and later to be interconnected with the Beaver Dam. The wisdom of the committee's action was demonstrated within 1 month after you took it.

For the first time in 15 years, we were able to immediately enter into a contract with the Southwestern Gas & Electric Co. of the Oklahoma type in the Arkansas area. That contract has been signed and approved and will go into effect as soon as the rates have been acted upon. And the company is building a line, a new line, of its own, to integrate its system with the line the committee said to build last year.

EXCESS OF SUBSTATION COST OVER ESTIMATE

The difficulty occurs in that we told you we could build this line and substation for $290,000. We took bids. The line overran our estimate, from $230,000 to $277,000. The substation bids overran from $60,000 to $73,000. We need $350,000 to build the line and substation instead of the $290,000. We have these funds. They are available, have been available for many years, for miscellaneous connections. We have the $350,000 available, because these bids exceeded what the committee stated they desired that we spend on this. I would not take further action without bringing this to the committee's attention and having you indicate that you did desire us to proceed, even though the cost was higher than we had indicated previously to you.

Chairman HAYDEN. Let me understand you. Actually, when the bids were so high, you did nothing about it, is that it?

Mr. WRIGHT. We have not taken any further action in the construction of the line. We have simply held the bids and are waiting for the advice of the committee.

Chairman HAYDEN. You think expending the full amount would be justified?

Mr. WRIGHT. I think you cannot afford not to, Mr. Chairman. I think you have solved a power problem in the eastern section of Arkansas, not only with the Government's power supply, but you have created integration with the company. It is Mr. Frank Wilkes' company, and the committee will remember, I am sure, that Mr. Frank Wilkes, at one time said he ought to be sent to prison if he ever made a contract like the Texas contract. Well thank God, he and I now see it a little differently, both of us do, and we have made a very good contract for both of us.

Chairman HAYDEN. Do you think Mr. Wilkes, then, would recommend this expenditure at this time?

Mr. WRIGHT. I know he will, because he is building a line to use this.

Here is the contract. I would like to leave a couple of copies with the committee for your information.

Chairman HAYDEN. Are there any other major items of your construction facilities that we need information about?

LINE FROM TABLE ROCK DAM TO SPRINGFIELD

Mr. WRIGHT. No. The one line we have asked for this year is a line from Table Rock Dam to Springfield. There is in existence 1 line now from Table Rock to Springfield, but there are 200,000 kilowatts of capacity going into Springfield, and the first 50,000-kilowatt unit will be on the line the latter part of 1959, and there are not enough electric lines to take the power out of Table Rock. When we get it

here, we get it into all of the other systems with which we are integrated.

Chairman HAYDEN. How much will that cost?

Mr. WRIGHT. That line will cost about $1 million. It is in the estimate.

Let us get it exact. $900,000.

MOBILE SUBSTATIONS

Then we have an item for two mobile substations. That happens to be my pet fetish. I believe, in the Southwest, that mobile substations will be the answer to many emergency problems that have plagued us there, both in immediate power supply and in meeting emergencies. For example, last year the cooperative at Salem, Ark., one Saturday afternoon blew up their substation. And had I had a mobile unit, as I desire now to have, I would have had that cooperative back in service within 6 to 8 hours. Not a single ounce of food would have been spoiled in lockers. As it was they were off 3 or 4 days or a week.

Chairman HAYDEN. It is my understanding that the public utilities generally have adopted these mobile units.

Mr. WRIGHT. Yes, sir, and in the event of war they would be invaluable. I mean, you can pull them up and pull them down the highway 30 or 40 miles an hour, and grab onto a line, and you are in business.

Chairman HAYDEN. What do they cost?

Mr. WRIGHT. I think we have, for the 2 of them, $225,000.

Chairman HAYDEN. For two?

Mr. WRIGHT. Yes.

Chairman HAYDEN. That is about the average size?

Mr. WRIGHT. The average size approved for proper utilization. You can team both of them up together or use them separately. We would actually probably station one at Muskogee, Okla., and the other one in the upper central part of Missouri, so that we could move in either direction with both of them.

And in the event of emergency, you simply get a police escort and clear the highway and get there with it.

In the event somebody wants to put in a load quickly—suppose somebody has a plant that will be built 6 months before they can get a substation. We can wheel in one of these mobile substations and pick up that plant for that customer for 6 months until he gets his own substation built. There is much of that out there.

Chairman HAYDEN. My information is generally that private utilities throughout the country have adopted this idea, and they find it to be sound.

Mr. WRIGHT. It certainly is in my judgment, Mr. Chairman, and it certainly has come from the utilization by other people of it.

RECRUITMENT PROBLEM

I have one other thing I would like to tell you, following the question that you asked the Secretary. The question of securing engineers is a very difficult problem. I know of no item in such short supply as an engineer. We have been trying for two and a half years to employ any college graduate. I believe the starting salary

in the Government is about $5,400 a year. I remember I started at $18 a week. You cannot get them. We have not got any.

This year we are taking in as part of a training program a freshman out of the A. and M. college in Oklahoma and a sophomore out of another technical school out there, for draftsmen. The same experience is being had by numerous other power companies with whom we are associated. Consequently, when you have an engineer, you not only have to hang on to him, but at the present moment he is having to do about a job and a half, because you are not able to bring in, or have not been able to get, the younger talent that an organization normally feeds in by attrition. And it is a very real problem in this country. What the answer to it is I do not know.

Chairman HAYDEN. I know in my own State the colleges are aware of that fact and are doing all they possibly can to encourage men to take the basic studies that lead to an engineering career. Because that need is growing. It is a very serious matter throughout the country.

Mr. WRIGHT. A graduate out of college in engineering in almost any engineering course this year is courted like no bride was ever courted in the world. He is wined and dined and taken to see company properties and imbued with the tremendous advantages he will have. I know. My son graduated 1 year ago in electrical engineering. And I expect he had 150 offers of employment. He still gets them. The Government is actually going into the competitive market to try to hire young engineers. No use kidding ourselves about that.

We have had several problems with older engineers, where they were offered better jobs, and we were pretty hard put to hold them. You do not feel like standing in a man's way when a better opportunity comes along, no matter how long he has been with you. And it is a real problem.

OPERATION AND MAINTENANCE

Chairman HAYDEN. The budget estimate for operation and maintenance is $1,045,000. The justifications will be included in the record. I note that in the justification the only increase involved is $10,000 for power contracts and rates. Please comment on the need for this increase.

(The justification referred to follows:)

Analysis of adjusted appropriation—Operation and maintenance

Activity	Total available, 1957 (1)	Increase in base due to Government's contribution to the retirement fund (2)	Adjusted appropriation (3)
1. System operation and mainteance	$500,000	$21,000	$521,000
2. Power contracts and rates	95,000	6,000	101,000
3. General administration	405,000	18,000	423,000
Total	1,000,000	45,000	1,045,000

Analysis by activities—Operation and maintenance

Activities	Adjusted appropriation	Estimate, 1958
1. System operation and maintenance	$521,000	$521,000
2. Power contracts and rates	101,000	111,000
3. General administration	423,000	413,000
Total	1,045,000	1,045,000

OPERATION AND MAINTENANCE—GENERAL STATEMENT

The estimate of $1,045,000 for fiscal year 1958 is an increase of $45,000 over the appropriation for fiscal year 1957 of $1 million. The increase of $45,000 is due to the Government's contributions to the retirement fund. The 1958 estimate is based on operating and maintaining the transmission system, carrying on power marketing negotiations, providing customer services, and administering the contracts between the administration and certain generation and transmission cooperatives.

The 1957 appropriation carried out the operation and maintenance program under the following activities and amounts: System operation and maintenance, $500,000; power contracts and rates, $95,000; and general administration $405,000.

The estimate of $1,045,000 for the operation and maintenance program for fiscal year 1958 will be executed under the following activities and amounts: System operation and maintenance, $521,000; power contracts and rates, $111,000; and general administration, $413,000.

JUSTIFICATION—OPERATION AND MAINTENANCE

System operation and maintenance, $521,000

The estimate of $521,000 for fiscal year 1958 is an increase of $21,000 over the $500,000 available for fiscal year 1957. This increase results from the Government's contributions to the retirement fund.

In order to accomplish its function of marketing surplus power from Federal hydroelectric generating plants in the southwestern power area the Administration has constructed 1,032 miles of high-voltage transmission lines, with appurtenant facilities, to power load centers and to points of interconnection with other utility systems. Power will be marketed from 8 Federal hydroelectric generating plants, and 3 steam generating plants owned and operated by generation and transmission cooperatives, in the fiscal year 1958.

Five of the hydroelectric plants are directly interconnected by the transmission grid system of the Administration. Through interconnections with the systems of the generation and transmission cooperatives and the private utility systems, the power generated at these plants and the three steam generation plants owned by the cooperatives, is integrated with power generation from steam plants of the private utilities. This obtains the maximum benefit from integration of hydroelectric and steam generated power.

The power produced from the three other Federal hydroelectric plants which are now in operation, and which are isolated from the main grid system of the Administration is marketed through contractual arrangements with private utility systems and generation and transmission cooperatives. This power is transported over the transmission facilities of these entities, for their own use as customers of the Administration, and for service to other customers of the Administration.

The complex problems encountered in the operation of these vast interconnected systems make it necessary to maintain a staff of highly trained technical personnel, and to operate and maintain the transmission system of the Administration with the maximum of efficiency to assure dependable service throughout the southwestern power area.

In order to furnish and assure reliable service over its system, the Administration employs three line maintenance crews which are stationed at Ada and Muskogee, Okla., and Doniphan, Mo. These crews patrol, maintain, and perform minor construction and replacement work on the following miles of line:

Ada, Okla., crew	318.7 miles
Muskogee, Okla., crew	354.2 miles
Doniphan, Mo., crew	327.5 miles

Substation maintenance crews are located at Springfield, Mo., and Muskogee, Okla. These crews maintain, and perform minor construction and replacement work on substations, meter and relays, and communication equipment located over the entire transmission system of the Administration, and also maintain metering communication, and protective equipment owned by the Administration, but located at 8 federally owned hydroelectric plants, and at 15 substations owned by interconnecting utility systems.

Load dispatchers are located at Springfield, Mo., substation, and are responsible for scheduling and dispatching power to meet load demands while coordinating to the best advantage the loading of the various hydroelectric plants operated by the Corps of Engineers, together with steam-generating plants owned and operated by the generating and transmissions cooperatives. In order to perform this function properly, it is necessary to maintain a 24-hour-a-day, 7-day-a-week schedule. A substation operator is stationed at the Gore, Okla., substation in order to switch power during peak-load hours.

In addition to the maintenance and operation of transmission facilities it is necessary to maintain a continuous program of clearing rights-of-way on transmission lines. This preventive maintenance is performed in order to avoid outages that interrupt the power service, resulting from brush fires and tree growth on the rights-of-way.

Funds are also included under this activity for the engineering and supervisory staff, which furnishes the executive and staff direction of engineering planning, and technical supervisory functions in connection with the operation and maintenance of the transmission system, and the coordination and integration with other utility systems. In addition, this staff participates in the study of power resources and requirements in order to assure dependable electric service to customers and interconnecting systems.

Also, the staff in accordance with existing regulations makes studies of the revenue potential from multiple-purpose projects to be constructed by the Corps of Engineers, in order to determine the feasibility of installing power facilities in such proposed projects. When these projects have reached the preliminary planning stage the staff participates with the Corps of Engineers in making studies of the design of the power transmission installations, such as, circuit breakers, transformers, telemetering relays, supervisory equipment and associated equipment for dispatching and control of the power produced from such projects.

Power contracts and rates, $111,000

The estimate of $111,000 for fiscal year 1958 is an increase of $16,000 over the $95,000 available for fiscal year 1957. This increase of $16,000 includes $6,000 for the Government's contributions to the retirement fund, and $10,000 for additional personnel and related costs required to perform the necessary functions of this activity.

This estimate covers funds for personal services and other costs of the Division of Rates and Customer Service. The staff of this Division carries out all marketing agreements with preferred customers and private utilities for the purchase, sale and interchange of electric power and energy.

In order to perform the function outlined above, it is necessary for this staff to conduct negotiations and develop contracts for the sale, exchange, transfer, and purchase of power and energy, and for the lease of power-system facilities, together with arrangements for the wheeling of Government power over the various transmission systems. To make continual analyses of power rates to insure Government's investment in both production and transmission facilities. To calculate rates and prepare payout studies for submission to the Federal Power Commission for approval. To perform customer services under all contractual agreements. Conduct studies of cost allocations made to power by Corps of Engineers. Conduct studies of the market for power to be produced from future projects, and the revenues that would be derived from sale of such power.

General administration, $413,000

The estimate of $413,000 for fiscal year 1958 is an increase of $8,000 over the $405,000 available for fiscal year 1957.

This estimate for this activity includes the cost of personal services, travel, and other general administrative expenses chargeable to electric operations of the Administration, but not directly chargeable to a particular electric function, such as production, transmission sales, and customer services, etc. These costs cover the executive direction and service functions necessary to accomplish the overall program of the Administration.

Additional costs not pertaining to the direct electric operations of the Administration are included under this activity because of action by the Congress in providing funds for the reactivating of contracts with certain generation and transmission cooperatives which placed an additional administrative burden on the Administration. These costs include additional administrative and technical personnel, together with related costs, that will be necessary to properly administer the contracts between this Administration, and the generation and transmission cooperatives.

The net increase of $8,000 results from the Government's contribution to the retirement fund of $18,000, and a decrease of $10,000 in the estimated requirements for personal services in connection with the reactivation of contracts with certain generation and transmission cooperatives.

Appropriations

1948	$125, 000	1953	$1, 450, 000
1949	391, 000	1954	1, 600, 000
1950	525, 000	1955	2, 165, 000
1951	760, 000	1956	1, 250, 000
1952	1, 255, 712	1957	1, 000, 000

Itemization of estimate, operation and maintenance

		1957 estimate	1958 estimate
	PROGRAM AND FINANCING		
	Appropriation	$1, 000, 000	$1, 045, 000
	OBLIGATIONS BY OBJECTS		
01	Personal services	786, 000	782, 000
02	Travel	96, 000	96, 000
03	Transportation of things	2, 000	2, 500
04	Communication services	24, 000	25, 000
05	Rents and utility services	18, 000	18, 000
06	Printing and reproduction	1, 500	2, 000
07	Other contractual services	25, 000	26, 000
08	Supplies and materials	40, 000	40, 000
09	Equipment	6, 000	7, 000
11	Grants, subsidies, and contributions: Contributions to retirement fund	----------	45, 000
13	Refunds, awards and indemnities	500	500
15	Taxes and assessments	1, 000	1, 000
	Total obligations	1, 000, 000	1, 045, 000

POWER MARKETING DIVISION ACTIVITY

Mr. WRIGHT. We actually have decreased another item, another function, so that the overall amount is exactly the same, $1 million.

The activity in the Power Marketing Division of our setup is constantly increasing, with the increased number of customers, the increased number of contracts that must be serviced, and the increased and constantly increasing relationship in this integration. We have an accounting procedure so complicated in the Southwest that nobody has ever tried to write it down. We meet with the so-called Southwest Power Pool Accounting Committee, consisting of 26 utility companies, ourselves, and several other public operations out there, about once every 6 months to revise the accounting procedures, so that the interconnections between systems or how the power will be accounted for is determined. It is a very complicated matter. And that is constantly increasing in difficulty. And those are the items that occasion this increase; plus the fact that we are going to have to take a great deal more active part in cost-allocation work on these projects than has been the case in the past.

CONTINUING FUND

Chairman HAYDEN. With respect to the continuing fund the estimate is $5 million, which is a decrease of $1,400,000 below the amount approved for the current year.

We will include the justification in the record.

(The justification referred to follows:)

Analysis by activities—Continuing fund

	Appropriation	Estimate, 1958
1. Purchase of power and service charges	$3,696,000	$2,810,000
2. Rental of transmission facilities	2,704,000	2,190,000
Total	6,400,000	5,000,000

JUSTIFICATION—CONTINUING FUND

Power purchases, service charges, and rental of facilities, $5 million

Obligations to be incurred during the fiscal year 1958, under the continuing fund are based upon contractual arrangements for the purchase and sale of power including service charges for transport of power with private utilities and municipalities in the area, and for the purchase of power and lease of transmission capacity from power cooperatives in the area. Estimated fund requirements by activity are listed.

	Purchase of power and service charges	Rental of transmission facilities	Total
1. Oklahoma utility companies	$450,000		$450,000
2. Central Electric Power Cooperative	320,000	$760,000	1,080,000
3. Northwestern Electric Power Cooperative, Inc	1,510,000	480,000	1,990,000
4. Western Farmers Electric Cooperative	210,000	950,000	1,160,000
5. Sho-Me Power Corp			
6. KAMO Electric Cooperative, Inc			
7. Others	320,000		320,000
Total	2,810,000	2,190,000	5,0000,00

In accordance with a directive from Congress as expressed in House Report 747, on the public works appropriation bill for fiscal year 1956, this Administration has amended contracts with certain generation and transmission cooperatives to include provisions for the settlement of accounts on a net-balance basis. As a result of this action, the estimate of fund requirements for the continuing fund has been reduced from $6,400,000, appropriated for fiscal year 1957, to $5 million for fiscal year 1958.

The estimated fund requirements have been calculated in accordance with provisions within each individual contract and are presented herewith.

1. Payment to Oklahoma utility companies:		
(*a*) Charges from companies:		
Purchase of power:		
17,333,600 kilowatt-hours times $0.004	$69,334	
75,000,000 kilowatt-hours times $0.00325	243,750	
Service charge: 173,333,600 times $0.00125	216,667	
Total charges		$529,751
(*b*) Sales to companies: 39,394×0.15×$1.15×12		−81,546
(*c*) Amount due companies		448,205

2. Payment to Central Electric Power Cooperative:
Charges from cooperative:
(a) Rental payments:
Transmission investment ($9,748,755):
$\frac{\$9,748,755}{1,000} \times 4 \times 12$ $467,940
Estimated overheads 85,000
Estimated maintenance, operation, and replacement 207,161
Total 760,101
(b) Purchase of power:
Sales to Government:
124,700,000 kilowatt-hours total:
115,000,000 kilowatt-hours times $0.006 .. $690,000
9,700,000 kilowatt-hours times $0.003 .. 29,100
Total 719,100
Sales to cooperative: 18,000 × 4,000 × $0.0055 ..... −396,000
Net due cooperative 323,100
(c) Total $1,083,101

3. Payment to Northwest Electric Power Cooperative, Inc.:
Charges from cooperative:
(a) Rental payments:
Transmission investment ($6,476,459):
$\frac{\$6,476,459}{1,000} \times 4 \times 12$ $310,870
Estimated overhead 39,000
Estimated maintenance, operation, and replacement 125,078
Total 474,948
(b) Purchase of power and service charge:
Sales to Government:
332,700,000 kilowatt-hours total:
$150,000 × 12 1,800,000
282,000,000 kilowatt-hours:
50,700,000 kilowatt-hours × $0.003 152,000
1,952,000
Service charge by cooperative:
35,000 × 4,000 × $0.00235 329,000
Sales to cooperative: 35,000 × 4,000 × $0.0055 ..... −770,000
Net due cooperative 1,511,000
(c) Total 1,985,948

4. Payment to Western Farmers Electric Cooperative:		
Charges from cooperative:		
(*a*) Rental payments:		
Transmission investment ($11, 960, 277):		
$\frac{\$11,960,277}{1,000} \times 4 \times 12$	$574, 093	
Estimated overheads	95, 000	
Estimated maintenance, operation, and replacement	280, 547	
Total	949, 640	
(*b*) Purchase of power:		
Sales to Government: 249,600,000 kilowatt-hours × $0.0042	1, 048, 320	
Sales to cooperative: 35,000 × 4,000 × $0.0055	−836, 000	
Net due cooperative	212, 320	
(*c*) Total		$1,161,960
5. Sho-Me Power Corp.:		
Charges from cooperative:		
(*a*) Rental payments:		
Transmission investment ($5,131,058):		
$\frac{\$5,131,058}{1,000} \times 4 \times 12$	$246, 290	
Estimated overhead	67, 314	
Estimated maintenance, operation, and replacement	121, 847	
Total	435, 451	
(*b*) Purchase of power:		
Sales to cooperative: 50,000 × 4,000 × $0.0055	−1, 100, 000	
Net due Government	664, 549	
(*c*) (No expenditures from continuing fund.)		
6. KAMO Electric Cooperative:		
(*a*) Charges from cooperative:		
Rental payments:		
Transmission investment ($7,449,453):		
$\frac{\$7,449,453}{1,000} \times 4 \times 12$	357, 574	
Estimated overhead	47, 000	
Estimated maintenance, operation, and replacement	163, 329	
Total	567, 903	
(*b*) Purchase of power:		
Sales to cooperative: 26,000 × 4,000 × $0.0055	−572, 000	
Net due Government	4, 097	
(*c*) (No expenditure from continuing fund.)		
7. Others:		
(*a*) Purchase of energy: 58,000,000 kilowatt-hours times $0.0055		319, 000

Appropriations

1952	$250, 000	1955	
1953	1, 000, 000	1956	$6, 000, 000
1954	1, 200, 000	1957	6, 400, 000

Itemization of estimate—Continuing fund

	Estimate, 1957	Estimate, 1958
Program and financing: Appropriation	$6,400,000	$5,000,000
Obligations by objects: 07 Other contractual services	6,400,000	5,000,000

SETTLING OF ACCOUNTS ON A NET BASIS

Chairman HAYDEN. I understand that a reduction of $1,400,000 is a result of settling accounts on a net basis. Am I correct?

Mr. WRIGHT. That is correct, Mr. Chairman, plus something that has happened ever since this justification was written.

We have now renegotiated these contracts to a point, as the cooperative load increases and they put in more generation of their own, the Government's obligations on the use of the base transmission system will decrease in proportion to the load increase. In other words, gradually this obligation will decrease as far as the transmission cooperatives are concerned throughout the year.

We have adopted two things in that connection.

We have adopted a policy of reducing our contract demands with a certain area where generation may increase, and letting them increase in other areas, which will permit these people to put in large generating units and overcome the major problem that cooperatives had about generating their own power, plus the fact that we will furnish standby out of a common reserve pool for these people at a very reasonable charge, and these two things will now permit all of the cooperatives in the area to assume local utility responsibility and provide themselves with power as they need it to the extent that hydro is not available.

IMPLEMENTING LEASE-PURCHASE CONTRACTS

Chairman HAYDEN. Now, for the fiscal year 1954, $1,200,000 was provided for the continuing fund. The statement of the managers on the part of the House included the following paragraph, which I will read:

> None of the funds allowed are to be used for the purpose of implementing existing contracts with REA cooperatives which provide for the lease-purchase of transmission or generating facilities. The funds may be used only for the purpose of electric power and energy and the payment of wheeling service charges at rates and in amounts comparable to those paid in the Southwestern Power Administration area under existing contracts based only on use value received with no additional allowance for purchase or lease of facilities. Such arrangements may be made with REA cooperatives in the area, but no funds for this purpose are to be available after February 28, 1954.

The Department, pursuant to the above-quoted statement, determined that no funds were provided to implement the lease-purchase contracts and so informed the generation and transmission cooperatives.

COURT DECISION

One of the cooperatives—Central—sought relief in the United States District Court for the District of Columbia, and the court held that the $1,200,000 provided in the continuing fund was available to carry out the existing lease-purchase contract. This decision of the district court was reversed by the United States Court of

Appeals for the District of Columbia, on the basis that the district court lacked jurisdiction, since the Government had not consented to be sued.

The cooperatives have made claims based on the nonoperation of the lease-purchase contracts during fiscal year 1954. I am advised that these claims total approximately $1,800,000.

RULING OF COMPTROLLER GENERAL

The Comptroller General has ruled that the funds made available in the continuing fund in 1954 are available to implement the lease-purchase contracts. A copy of the Comptroller General's decision will be included in the record at this point.

(The document referred to follows:)

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, November 8, 1956.

B–122254

The honorable the SECRETARY OF THE INTERIOR.

DEAR MR. SECRETARY: Reference is made to letter of August 16, 1956, from the Administrative Assistant Secretary, concerning the claim of the Central Electric Power Cooperative against the Southwestern Power Administration, Department of the Interior, for fiscal year 1954, under contracts Nos. ISPA–305 and 306. The letter, in effect, requests that we reconsider the conclusion reached in letter dated April 6, 1956, to Central to the effect that fiscal year 1954 funds were available to implement the above referred-to contracts. The Assistant Secretary states that, after review and study of the questions involved, the views set forth by the Administrator of the Southwestern Power Administration in his letter of June 13, 1956, are concurred in by your Department, and certain material is submitted in support thereof.

The facts in the case are as follows:

On January 19, 1950, Central entered into two contracts with the Government, acting through the Administrator of the Southwestern Power Administration. The first contract (ISPA–305) provided that Central should construct—out of funds loaned by the Rural Electrification Administration—and lease to the Government for a period of 40 years an electric transmission system. The Government, in turn, agreed to maintain and operate the transmission system for the same period of time and to pay Central rental thereon in accordance with certain formulas defined in the contract which were designed to amortize during the period of the loan the actual cost of the transmission system to Central. Under the second contract (ISPA–306) the Government was to buy the entire output of the steam electric generator plant to be constructed by Central—also out of the REA loan—and the Government was to sell to Central surplus electric power and energy generated at the Government's hodroelectric plants in the area. This contract also provided for monthly payments by the Government to Central for the electric output of the steam generating plant at a rate which would amortize Central's loan (on account of the generating plant) and also cover other costs incurred by Central incident to the operation and maintenance of such plant. Each of the contracts contained a provision to the effect that operation of the contract was contingent on the Congress making the necessary appropriations to enable the Government to carry out the provisions of the agreement. The transmission system of Central was completed prior to June 30, 1953, and pursuant to the contract Central delivered the system to Southwestern and started purchasing electric power and energy from Southwestern.

The act of July 31, 1953 (67 Stat. 262), making appropriations for the Department of the Interior for the fiscal year ending June 30, 1954, provided that—

"Not to exceed $1,200,000 shall be available during the current fiscal year from the continuing fund for all costs in connection with the purchase of electric power and energy, and rentals for the use of transmission facilities."

The statement of the House managers accompanying the conference report (H. Rept. 947, 83d Cong.) on the above-cited appropriation act reads, in pertinent part, as follows:

"Amendment No. 6: Appropriates $1,200,000 instead of $150,000 as proposed by the House and $2 million as proposed by the Senate.

"None of the funds allowed are to be used for the purpose of implementing existing contracts with REA cooperatives which provide for the lease-purchase of transmission or generating facilities. The funds may be used only for the purchase of electric power and energy and the payment of wheeling service charges at rates and in amounts comparable to those paid in the Southwestern Power Administration area under existing contracts based only on use value received with no additional allowance for purchase or lease of facilities. Such arrangements may be made with REA cooperatives in the area but no funds for this purpose are to be available after February 28, 1954."

On the basis of the House managers' statement, Southwestern determined that no funds were appropriated to carry out the terms of contracts Nos. ISPA-305 and 306 and an interim contract was entered into between Central and Southwestern on November 3, 1953. Central evidently entered into the interim contract only because Southwestern had refused to make payments under the other contracts.

Central filed a suit on October 15, 1953, in the United States District Court for the District of Columbia, in which it petitioned the court for summary judgment to direct "that the defendants not refuse or fail to carry out the terms of such contracts [ISPA-305 and 306] with the plaintiff for the reason that Congress has failed to or refused to appropriate funds" for the fiscal year 1954 out of which the obligations incurred under the contracts might legally be paid. The district court granted Central's motion for a summary judgment on March 29, 1954. The Government appealed from the judgment of the court and on April 7, 1955, the United States Court of Appeals for the District of Columbia, in an opinion reported in 223 F. 2d 623, reversed the judgment of the District Court. This reversal was not on the merits of the case but was, in effect, on the basis that the district court lacked jurisdiction—since the Government had not consented to be sued—on such a matter in the district courts.

The claims and counterclaims of Central and Southwestern were submitted to us for direct settlement by the Southwestern Power Administration on December 3, 1954. By our Claims Division's settlement dated December 1, 1955, there was found due Central—in connection with the above referred to contracts—the sum of $493,939.96 on account of rental payments for the period August 1952 to June 1953, under contract No. ISPA-305 ($66,112.67), and payment for purchase of power and wheeling service charges for the period July 1, 1953, through June 30, 1954, under Interim Electric Service Agreement No. 14-02-001-658 ($427,827.29). The full amount allowed was deposited into the Treasury to collect for power sold by Southwestern to Central.

In explanation of the settlement it was stated, in part therein, as follows:

"Amounts due between the claimant and the Southwestern Power Administration after June 30, 1953, may not be computed under the terms of contracts Ispa 305 and 306 because appropriated funds are not available for implementation of the contracts after that date. Computation of the amounts due from each party to the other for the period July 1, 1953, through June 30, 1954, has been made, therefore, in accordance with the interim agreement of November 3, 1953, No. 14-02-001-658."

Central, by letter dated December 12, 1955, requested that the conclusion that there was no appropriation to carry out contract Nos. ISPA-305 and 306 between it and Southwestern for the period July 1, 1953, to June 30, 1954, be reviewed and further requested that amounts of money due and payable by Central and Southwestern for such period be recomputed on the basis of the terms of the two cited contracts, rather than on the basis of the interim contract No. 14-02-001-658, dated November 3, 1953. Upon careful consideration of the matter, we determined that appropriated funds were available to implement contract Nos. ISPA-305 and 306 and so notified Central by letter of April 6, 1956. As indicated above, your Department has requested reconsideration of this conclusion.

During the years 1949 and 1950, the United States (acting through Southwestern) entered into similar contracts with four other generating and transmission cooperatives, namely N. W. Electric Power Cooperative, Inc., KAMO Electric Cooperative, Inc., Western Farmers Electric Power Cooperative and Sho-Me Power Corp. Two of these cooperatives, N. W. Electric Power Cooperative, Inc., and Western Farmers Electric Power Cooperative have filed claims with Southwestern, similar to Central's, which Southwestern transmitted here for our information.

It is argued in the above referred to letter of Southwestern, dated June 13, 1956, and in the brief of your Department, transmitted with the Administrative Assistant Secretary's letter that:

(1) There were no funds made available in fiscal year 1954, to implement the contracts in question;

(2) There was no performance by Southwestern or the cooperatives during fiscal year 1954 under such contracts, so that it will be impossible to make an accurate accounting between Southwestern and the cooperatives under the lease-purchase contracts;

(3) Our decision of April 6, 1956, cannot be reconciled with our previous decisions bearing on the same questions;

(4) Proposed amendments to the lease-purchase contracts will give the cooperative economic benefits and advantages equal to or greater than those granted the cooperatives under the original contracts.

It is stated in the brief in conclusion that under present circumstances your Department does not believe the claims of the cooperatives should be paid or allowed.

In support of the argument concerning the availability of funds, it is contended, in effect, that it was clear to Southwestern that the amount made available by the Congress in the continuing fund for fiscal year 1954 was not sufficient to implement the lease-purchase contracts and that, hence, Southwestern had no alternative but to look to the legislative history and the directions of the congressional committees accompanying the bill, including the statement of the House managers, for guidance. It is also contended therein that a reading of the congressional debate on your 1954 appropriation act will leave no question that both the House and the Senate understood the purpose of the House managers' statement and that it was intended to limit the appropriation so that Southwestern would be unable to implement the lease-option contracts. It is further contended that "There seems to be only one conclusion, and that is when the conference report was approved, the Congress also approved the accompanying statement of the House managers thereby adopting as the language of the Congress itself the statement with reference to the $1,200,000."

Concerning the amount made available in the continuing fund, we would like to point out that the legislative history of your fiscal year 1954 appropriation act discloses that $1,200,000 was considered sufficient to implement the generating and transmission contracts for an 8-month period, during which period it appears to have been contemplated that a final solution of the power problem in the area involved would be reached. (See 99 Congressional Record, 9936.) We agree that a reading of the debate upon the appropriation provision involved leaves no question that both the House and Senate understood the purpose of the House managers' statement and that the statement was intended (by its authors, some of the House conferees) to limit the appropriation so that Southwestern would be unable to implement the lease-purchase contracts. However, we do not agree with the conclusion that when the conference report was approved the Congress also approved the accompanying statement of the House managers "thereby adopting as the language of the Congress itself the statement with reference to the $1,200,000." While the statement of the managers on the part of the House accompanied the conference report and the conference report was agreed to by both Houses, there is nothing in the legislative history to indicate that the Congress approved or adopted the statement by the House managers. In fact, such history discloses that some Members of the Senate and House questioned the effect of the House managers' statement. In this connection, note the following statements made on the floor of the House and Senate during the debate on the conference report, as contained in the Congressional Record, volume 99, pages 9937, 9938, 9995, and 9996, respectively:

"Mr. MONRONEY. The contingencies involved are before the Senate only because they are written into the House report, not into the bill itself, which, of course, *as the statutory law will control.* * * *

* * * * * * *

"Mr. MONRONEY. * * *

"As the junior Senator from Oklahoma reads the House report, while it has a bearing on the legislation, *it is not statutory law.* * * *

* * * * * * *

"Mr. MAGNUSON. *So that the record may be clear, the statement of the House managers is not binding upon the Senate. The Senate has not agreed to it. It is merely a statement on the part of the managers of the House.*

* * * * * * *

"Mr. RAYBURN. * * *

"I call attention to the language in the bill and the language here, to see which one of these will be the law. The gentleman has read the wording in the bill and then he has read this statement of the conferees. Which one of these is going to be the law? It is what the conferees say they want done or what is going to be the law?

* * * * * * *

"Mr. RAYBURN. *We would like the language of the bill to be the law* and not some statement made by a bunch of conferees." [Emphasis added.]

It appears from the quoted statements that some Members of the House and Senate did not consider the statement of the House managers as binding on the Congress. Thus, it is doubtful whether the agreement to the conference report indicates the Congress agreed with the statement of the House managers or whether it considered the statement not to be a part of the law and ineffective.

Also, we would like to point out that the language used in the continuing-fund provision in your fiscal year 1954 appropriation act was exactly the same as the language used in the previous fiscal year (1953) and we understand that the continuing fund was used during the fiscal year 1953, to implement contracts ISPA–306 and 306 with Central. To contend that the same language used in the appropriations for 2 succeeding years means something entirely different only could be justified by concluding that the Congress adopted as law the statement of the House managers in the conference report which as we indicated above does not appear to be the case.

Further, as indicated above, the United States District Court for the District of Columbia held that the $1,200,000 made available in the continuing fund for fiscal year 1954, was available to carry out the provisions of contracts ISPA–305 and 306. While the judgment of the district court was reversed by the United States Court of Appeals for the District of Columbia, the reversal was not on the merits, that is, not on the question of the availability of the funds, but was on the ground that the district court lacked jurisdiction since the Government had not consented to be sued. It is understood that the three judges who heard the appeal indicated orally that they also considered the funds available to implement the lease-purchase contracts.

The language used by the Congress in the continuing-fund provision in your fiscal year 1954 appropriation act is clear, positive, and unambiguous. There is nothing in the language restricting the use of the fund to the purchase of electrical energy and payment of wheeling service charges. It is specifically provided therein that the continuing fund is to be available for rentals for the use of the transmission facilities, and it appears that this would include rent to be paid the cooperatives by Southwestern for lease of the transmission lines. Had the Congress intended to restrict the use of the funds of Southwestern so as to nullify the lease-purchase contracts, effective July 1, 1953, it could have done so by use of appropriate language in the act itself. Although the statement of the House managers accompanying the conference report may indicate an intent on the part of some members of the House conferees to prohibit use of the funds in question for implementing the lease-purchase contracts, such a provision was not enacted into law. Any inconsistency between the language used in a statement on the part of the House managers accompanying a conference report and the language used in a bill as enacted into law by the Congress must be resolved in favor of the language used in the law (Cf. *Pennsylvania R. R. Co.* v. *International Coal Co.*, 230 U. S. 184; *Caminetti* v. *United States*, 242 U. S. 470, 490; *Wisconsin R. R.* v. *Chicago, Burlington & Quincy R. R. Co.*, 257 U. S. 563).

The language of the act itself being clear, any doubt arising only from the effect, if any, to be given to the statement in the conference report which it is doubtful whether the Congress adopted, there seems particularly to be apposite here the language used by the court in the Wisconsin R. R. case cited above, at page 589, as follows:

* * * Committee reports and explanatory statements of members in charge made in presenting a bill for passage have been held to be a legitimate aid to the interpretation of a statute where its language is doubtful or obscure. * * * But when taking the act as a whole, the effect of the language used is clear to the court, extraneous aid like this cannot control the interpretation. * * * *Such aids are only admissible to solve doubt and not to create it.* * * *" [Italics supplied.]

Moreover, the Supreme Court in *Ex Parte Collett* (337 U. S. 55, 61), in applying a similar rule stated:

"* * * The short answer is that there is no need to refer to the legislative history where the statutory language is clear. 'The plain words and meaning of a statute cannot be overcome by a legislative history which, through strained

processes of deduction from events of wholly ambiguous significance, may furnish dubious bases for inference in every direction' (*Gemsco* v. *Walling*, 324 U. S. 244, 260 (1945)). This canon of construction has received consistent adherence in our decisions."

In view of the foregoing, we conclude, upon review, that funds made available to Southwestern in its continuing fund for the fiscal year 1954 are available to implement the lease-purchase contracts with the cooperatives.

This conclusion makes it necessary to now consider the following statement contained in the brief of your Department.

"In conformity with the clear intent of Congress, neither Southwestern Power Administration, Central Electric Power Cooperative, nor any of the other generating and transmission cooperatives having lease option contracts and accompanying power contracts with the Southwestern Power Administration, performed any acts or fulfilled any obligations under such contracts during the period in question. The operations and business conducted by the Southwestern Power Administration with the generating and transmission cooperatives were performed in accordance with and under the provisions of interim contracts. * * *"

This issue (of performance) was raised for the first time after we had determined that funds were available to implement Central's lease-purchase contract. No such allegations were made when the claims were sent here by the Administrator and certifying officer of Southwestern, Mr. Douglas G. Wright, for direct settlement. Central alleges in a brief submitted here, a copy of which is attached, at page 2, that at a conference with Department of the Interior officials they were advised that Southwestern "could not at that time pay Central its obligations under the agreements but would do so promptly if there was a determination that there was an appropriation and that the agreements were enforced. (It was agreed by SPA that the only reason it was not carrying out its obligations under the agreements was because, in its opinion, there was no appropriation)."

It is stated in your Department's brief, in connection with contract performance, that under the lease-option contract with Central (ISPA–305) the cooperative was to lease the transmission facilities to the Government and the Government was required to take physical possession, operate, maintain, repair and provide capital placements for the entire transmission system of the cooperative. It is also reported that under the said contract the Government was permitted to use all the capacity of the transmission system not required to serve Central's load for service to other customers of the Government. We are advised further that, under the interim contracts, the Government did not maintain, operate, repair, or replace or make capital replacements upon or to the transmission facilities and that the Government did not consider facilities available to it for serving new customers and did not add new customers during the period.

It is true that Southwestern did not maintain, operate, repair, or replace, or make capital replacements upon the transmission facilities. However, this cannot be blamed on Central since Southwestern on its own initiative ceased to operate and maintain the lines. Hence, Central apparently took over and operated the lines as provided by the default clause of the lease-purchase agreement. Further, although Southwestern may not have considered facilities available to it for serving new customers and did not add new customers during the period in question, it appears it could have done so under the interim agreement had it wished. This agreement provides, in section 3, as follows:

"(a) The Cooperative shall transmit for the Government over its transmission system such amounts of hydroelectric power and energy as the Government requires for the service of *any* of its customers, including the Cooperative, and such amounts of energy as the Government purchases from the Cooperative. Such hydroelectric power and energy shall be furnished by the Government and received by the Cooperative at the point of interconnection between the Government's facilities at the Bull Shoals Dam Project and the Cooperative's transmission system, and shall be delivered by the Cooperative to any point or points designated by the Government on the Cooperative's transmission system, at such voltage or voltages as are mutually agreeable to the parties hereto." [Emphasis added.

It is clear that, under the above-quoted provision, the cooperative was required to transmit for the Government such amounts of power and energy as the Government required for the service of "any of its customers." There appears to be no restriction in the provision on the type of customers, whether they were old or new. Also, while it may be that the services rendered between Southwestern and Central could have been different under the interim contract than under the existing contracts, it is understood that the services that actually were rendered were the same as would have been rendered under ISPA–305 and 306 except that Central operated and maintained the lines rather than Southwestern. Note, in

connection with the question of performance, the following statement made by Central in its brief (pp. 5 and 6):

"* * * The operation of the lines now and during the fiscal year 1954 has been identical with the operation of the lines by SPA. The entire transmission system was in operation continuously. Its capacity was unchanged. The capacity in the lines in excess of Central's use was in excess of the requirements of SPA, and was at all times available to SPA.

* * * * * * *

"Under either the lease agreement or the interim agreement SPA had full right to serve any other customer of the Government. At no time did the Government ask to serve any customer without receiving full and immediate approval of Central.

* * * * * * *

"Central started commercial operation of its generating plant on November 21, 1953 (see attached letters dated December 1, 1953, and December 15, 1953), at which time Central proposed to operate the plant at its full capacity of 15,000 kilowatts. SPA concurred in this method of operation and continually insisted that Central operate its powerplant at capacity. (See attached letters dated January 20 and April 20, 1954.) At all times the powerplant was operated at its maximum capacity with the full knowledge of and at the request of SPA. This was the maximum performance that could have been had either by Central or SPA.

* * * * * * *

"* * * When SPA ceased to operate the lines Central, of necessity, had to take over in order to assure continuity of service to Central's consumers and also to the consumers of SPA. The plant was operated to capacity. Neither SPA nor Central nor a combination of both could do no more. * * *"

In any event, when our holding that the funds in question are available to implement the existing contracts (ISPA–305 and 306) is considered, together with the provisions of article VI (b) of contract ISPA–305, as amended, it appears that Central is entitled to be paid to the extent that the amounts appropriated permit under the provisions of the said contract. The article provides, in pertinent part, that if the Government defaults for any reason other than failure of the Congress to appropriate necessary funds, and such default continues for 30 days or more after notice in writing shall have been given the Government, the cooperative may take possession of such facilities and operate and maintain them as long as the default continues. It further provides, in case of default by the Government for a reason other than lack of appropriations, that—

"* * * *the Government shall be liable to the Cooperative for, and Cooperative shall be entitled to receive from Government, the additional operation and maintenance expenses incurred by Cooperative by reason thereof in addition to the rental payments provided in Article V hereof.* Government shall have the right at any time during the term of this agreement to correct any such default on its part, retake possession of the leased facilities, and resume the operation and maintenance thereof under the terms of this agreement. During the period of any such default on the part of Government and subject to the provisions of this agreement with respect to reservation of capacity, the Cooperative shall permit Government to serve over such transmission facilities then existing customers of Government previously served by Government over such transmission facilities, and the rental payments and additional operation and maintenance expenses shall be treated as compensation to Cooperative for the use of Cooperative's Transmission System for that purpose." [Emphasis added.]

Since the Government defaulted for a reason other than lack of appropriations and continued to use the transmission facilities, it appears that the cooperative is entitled (within the limits of the available funds) to any operation and maintenance expenses it incurred plus the rental payments provided by article V.

As to the impossibility of making an accurate accounting between the benefits received by Central under the interim agreement and the actual benefits it would have received under the original contracts, note the following savings provisions in section 17 of the interim contract:

"* * * *Provided*, That if, during the effective term of this agreement, the aforementioned agreements of January 9, 1950, as amended, become operative by reason of the decision of a court of general jurisdiction, this interim agreement shall be void ab initio, and the rights and obligations of the Government and the cooperative shall, in all respects, be construed and adjusted retroactively to July 1, 1953, to conform to and comply with the provisions of the said agreements of January 9, 1950, as amended."

It appears to have been contemplated by the parties to the interim contract that if funds were subsequently held to be available to implement the lease-purchase contracts, the amounts due from Southwestern and Central to each other were to be computed from July 1, 1953, under such existing contracts. A letter dated December 3, 1954, from Douglas G. Wright, authorized certifying officer (and Administrator), of the Southwestern Power Administration to the Acting Comptroller General, discloses that Southwestern was able to prepare a pro forma statement reflecting a tentative balance due Central from Southwestern under contracts Nos. ISPA–305 and 306. It is stated therein that "the cooperative has not submitted to this Office any statement setting forth the net amount they believe is due them. However, I believe exhibit I–2 reflects fairly the net amount the cooperative will contend for." Subsequently, by letter dated October 26, 1955, the Acting Administrator transmitted to our Claims Division the billings of the cooperative under contracts ISPA–305 and 306 for the period July 1, 1953, through June 30, 1954, with the advice that such statements should be taken into account in settling the claims and counterclaims between Central and Southwestern. No question was raised therein as to the correctness of Central's billings or an inability to compute amounts due and payable under contracts ISPA–305 and 306, if fiscal year 1954 funds were held available to implement such contracts. Letter of June 13, 1956, last paragraph, from the Administrator, Southwestern Power Administration, to our Claims Division, discloses that Southwestern was able to compute amounts due it from Central for fiscal year 1954 under the lease-purchase contracts, although it is stated therein "that such billings are not approved by this Office nor is their settlement recommended." The Administrator also returned Central's billings computed under the lease-purchase contracts and did not question the accuracy of such billings. From the foregoing, it appears it is possible to determine amounts due and owing between Central and Southwestern for fiscal year 1954 under contracts ISPA–305 and 306.

Concerning the statement in the letter of June 13, 1956, from Southwestern to our Claims Division, that the statement in letter dated April 25, 1956, from our Claims Division to Southwestern, to the effect that amounts due and owing between Central and Southwestern may be paid in accordance with the terms of contracts ISPA–305 and 306, cannot be reconciled with previous decisions (35 Comp. Gen. 156 and B–125127, Feb. 14, 1956) of the Comptroller General bearing on the same question, it is pointed out that it was not necessary to pass on the question of the availability of funds to implement the lease-purchase contracts in fiscal year 1954 in such decisions.

As to the contention in your Department's brief that the proposed amendments to the original contracts will give the cooperatives economic benefits and advantages equal to or greater than those granted the cooperatives under the original contracts, we should like to point out three things: (1) The original contracts call for monthly payments; (2) the proposed amendments are not retroactive; and (3) payments in future fiscal years under either the original contracts or the proposed amendments thereto are conditioned upon appropriations being made by the Congress.

The failure of Southwestern to implement during the fiscal year 1954 the original contracts with the cooperatives appears to have been due to its erroneous belief that no part of the appropriation for that year was available therefor. But for such erroneous conclusion, the appropriation of $1,200,000 less amounts necessary for other objects would have been used for such purpose. It thus would appear equitable and proper to now use the remaining amount in that fund, not otherwise obligated, to satisfy the amounts due the cooperatives under the contracts. This would in effect implement them to the extent of the appropriation made available therefor.

Inasmuch as Southwestern was able to compute the amount due it from Central for fiscal year 1954, under contracts ISPA–305 and 306, and since it does not contend that Central's billings are erroneous or incorrect as computed under such contracts, it appears that consideration should be given to settlement of Central's claim on the basis of these billings unless there are specific mistakes in the billings.

As to Western Farmers Electric Power Cooperative and Northwest Electric Power Cooperative, their claims as indicated above were forwarded here by Southwestern for information only and not for direct settlement by us as was Central's claim. However, your Department's brief refers to the claims of the latter two cooperatives and it is stated therein that similar conditions existed as to these two cooperatives. Assuming that the lease-purchase contracts with these two cooperatives contained the same provisions in general, as those in ISPA–305 and 306, it would appear that these cooperatives would be entitled

to payment on the same grounds as Central. While some of their facilities were not accepted or approved by the Government, as provided in the contracts, neither were such facilities rejected. The Government was at fault here since apparently it refused to inspect the facilities or perform other acts required by or provided for in the contracts in the mistaken belief that funds were not available to implement such contracts. Moreover, since the contracts were reactivated in fiscal year 1956, it is assumed that the facilities that were completed in 1954 have now been approved and accepted by the Government. Thus, it appears that these two cooperatives are entitled to payment on the same basis as Central.

Under the contracts, the cooperatives are to be paid monthly on the basis of estimated billings with an adjustment at the end of the fiscal year so as to place the parties on an actual-cost basis. Since there is not a sufficient amount available in the continuing fund for the fiscal year 1954, to pay the full amount of the claims, it would appear payment thereof should be made on the same basis as though funds had been considered available to implement the lease-purchase contracts during fiscal year 1954. In other words, under the contract provisions each cooperative would have billed Southwestern monthly and would have been paid monthly until the appropriated amount not necessary for other objects was exhausted. Therefore, in determining the amounts due the claimants, it would appear the same procedure should be followed that is to say, the claims would be for settlement on the basis of the amounts that would have accrued to the claimants monthly under the contracts to the extent of available funds. In any month where there are not sufficient funds available to pay full amounts due, the claimants will be paid on a pro rata basis. Therefore, it is requested that you furnish us monthly billings showing amounts due Southwestern from each of the cooperatives involved for the period July 1, 1953, to June 30, 1954, under the lease-purchase contracts and monthly billings of amounts due the cooperatives from Southwestern for the same periods under the same contracts calling toour attention any errors therein. These billings will be necessary in order to settle the claims on the basis indicated above. It will be appreciated if the amount due each involved cooperative to the extent of the funds available is computed and information furnished as to any previous payments made for the involved period. Also, we would appreciate any comment you care to make as to such proposed basis of adjustment.

Sincerely yours,

JOSEPH CAMPBELL,
Comptroller General of the United States.

AMOUNT AVAILABLE FOR PAYMENT OF CLAIMS

Chairman HAYDEN. I have been advised that approximately $900,000 of the $1,200,000 provided in the continuing fund for fiscal 1954 is available for the payment of these claims.

Mr. WRIGHT. That is correct Mr. Chairman.

Chairman HAYDEN. Does the budget estimate of $5 million for the continuing fund for fiscal 1958 include funds for the payment of these claims?

Mr. WRIGHT. It does not, Mr. Chairman. I think I can be very helpful to the committee at this point, if the committee would allow me to put in the record, or furnish for the record, a tabulation which will give all of the figures involved in this matter.

Let me read them.

Why I would like to furnish them for the record, instead of handing them to you at this time, is that I want my controller to completely check them. I have put them together here in Washington since I have been here.

They indicate this fact, that there is some difference in the amounts which SPA estimates is due under the claims, and which the cooperatives estimate. They also indicate that if the accounts are balanced out, that is, what is still due SPA as against what is still due the cooperative under these claims—that if the estimates of the cooperative prevail, you would require a total of $861,640.61 to settle

all the claims, and there is available to settle that $481,008.51, or the total new money required to pay the cooperatives' claim on a balance out basis would only be $380,330.10. If the estimates of the SPA are correct, there would be due the cooperatives $335,248.67, and you have $481,008.51, or more than enough to pay on the basis of the SPA estimates.

Because of these differences in claims, the entire matter has been turned by SPA over to the General Accounting Office for settlement. But this is the first compilation and tabulation of the figures that the General Accounting Office has in one bunch. And I would like to give them to the committee at this point, as soon as I have checked them.

LIST OF CLAIMS

Chairman HAYDEN. You check them up and then correct the record, and they will be included in it.

(The information referred to appears on p. 523.)

SETTLEMENT OF CLAIMS BY GAO

Mr. WRIGHT. That will give you every bit of information about the status of these claims and accounts.

Now, there were five cooperatives that could have made claims. Three of them have submitted claims, and the other two have indicated that they have no desire to submit any claims and have no claim against the Government.

The matter was of this import: The Comptroller General has now ruled as we view it that these claims can be paid out of this money to the extent that it is available. Because of the nature of the claims, the complexity of the settlements, and the numerous rulings that have been made, no certifying officer was willing to certify these claims, and they have been handed to the Comptroller General for settlement, and he has accepted them to make settlement. And the question of whether additional funds will be available or not would have to be determined by the Comptroller General's Office, and how much of the claims he allowed.

Now, if you did not balance out, then you would require about a total of $1,200,000 of additional funds. But they owe us, under these claims—they owe SPA or the Government certain amounts. In other words, if the contracts were in effect, there would have been certain bills due each party, and they could have been balanced out if the Comptroller General wanted to balance them out.

Chairman HAYDEN. Well, he will undoubtedly do that.

Mr. WRIGHT. Yes, sir, I would think so.

I have no further statement, Mr. Chairman, except to add this: that Southwestern Power Administration does not have any major problem this year, or any controversy with anybody that I know of.

Senator KNOWLAND. That is the most encouraging news I have heard this session.

Mr. WRIGHT. We have full reservoirs. We have more water than we know what to do with. And our sole problem will be the proper utilization of this water and getting sufficient plants in to have enough hydroelectric power in the area to match the thermal generation as it develops.

Chairman HAYDEN. There were people that predicted that you never would have any water in those reservoirs, but Nature has fooled them apparently.

Mr. WRIGHT. When it does it down there, it does it right. You can be dying of thirst one minute and running from it the next.

Chairman HAYDEN. Well, if there are no further questions, we thank you, sir, and the committee will meet at 10 o'clock tomorrow morning.

(Whereupon, at 11 a. m., Thursday, June 13, 1957, the hearing was recessed until 10 a. m., Friday, June 14, 1957.)

PUBLIC WORKS APPROPRIATIONS, 1958

FRIDAY, JUNE 14, 1957

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met, pursuant to recess, at 10 a. m., in Room F–82, the Capitol, Hon. Carl Hayden (chairman of the subcommittee) presiding.

Present: Chairman Hayden, Senators Magnuson and Dworshak.

DEPARTMENT OF THE INTERIOR

BONNEVILLE POWER ADMINISTRATION

STATEMENTS OF DR. WILLIAM A. PEARL, ADMINISTRATOR; EARL D. OSTRANDER, DIRECTOR OF ADMINISTRATIVE MANAGEMENT; EUGENE L. WHITE, DEPUTY CHIEF ENGINEER; MILLER EVANS, ACTING DIRECTOR OF OPERATIONS AND MAINTENANCE; ROGER L. CONKLING, DIRECTOR OF BUDGET AND MANAGEMENT; AND MORGAN D. DUBROW, MANAGER, WASHINGTON, D. C., OFFICE

REQUEST BY THE CHAIRMAN

Chairman HAYDEN. The committee will come to order.

The House committee reported the public works appropriation bill yesterday. Inasmuch as the new fiscal year is fast approaching, this committee must proceed with the hearings.

I wish the Department would analyze the bill as reported and present to this committee, in regular form, the amendments you deem to be necessary.

Mr. Pearl, you may proceed.

Mr. PEARL. I have prepared a statement that I would like to submit, and, if it meets with your approval, I will go over our budget with the use of a few charts.

Chairman HAYDEN. All right.

(The statement referred to follows:)

Mr. Chairman and gentlemen of the committee, thank you for this opportunity to discuss with you the bases for our fiscal year 1958 appropriation requests.

I am sure I need not emphasize to this committee the important fact that the Bonneville Power Administration operates as a wholesaling electric system in the Pacific Northwest. Because of this our budget plans and our appropriation requirements are of direct and immediate importance to the region.

The Government's transmission system, as it now exists and as it must be expanded, is relied upon to carry to widely scattered load centers a major part of the entire electric power production of this four-State area. For this reason an acceptable quality of electric service in these four States is largely dependent upon proper operation and maintenance of our system and timely construction of required new transmission capacity. These, in turn, are dependent upon your approval of the appropriation requests which we are explaining today.

There is quite a modest increase in our program levels from fiscal year 1957 to fiscal year 1958. The changes in our requirements for new appropriations are substantially higher, however. The differences between program levels and appropriation requirements are indicated in the following table.

Program comparisons

	Fiscal year 1957	Fiscal year 1958	Program increase (comparable basis)
Construction:			
Program requirements exclusive of retirement costs	$23,343,652	$24,717,000	$1,373,348
Retirement costs		425,000	
Subtotal, construction	23,343,652	25,142,000	
Operation and maintenance:			
Program requirements exclusive of retirement costs	7,595,000	8,265,000	670,000
Retirement costs		365,000	
Subtotal, operation and maintenance	7,595,000	8,630,000	
Total, construction and operation and maintenance			2,043,348

Appropriations comparisons

	Fiscal year 1957	Fiscal year 1958	New appropriations increase
Construction:			
New appropriations	$18,700,000	$25,142,000	$6,442,000
Carryover	4,643,652		
Subtotal, construction	23,343,652	25,142,000	
Operation and maintenance	7,595,000	8,630,000	1,035,000
Total, construction and operation and maintenance			7,477,000

Construction

Programwise, our construction level for 1958 is $1,373,348 higher than in 1957. This reflects a substantial upward revision in load estimates (requiring an acceleration of construction schedules) and provision for transmission capacity to wheel power from new non-Federal generating plants.

Wheeling by the Government is of real and long-term importance to the economics of power transmission in the Pacific Northwest. Therefore, I will mention to you some of the most significant policy and economic considerations involved.

With congressional approval, in several cases we have already entered into arrangements for the long-term firm wheeling of non-Federal power. These cases, however, are not as extensive as the wheeling contemplated as part of our fiscal year 1958 plans. The new Priest Rapids plant now under construction by the Grant County Public Utility District illustrates the policy considerations involved in wheeling on a major basis.

The Priest Rapids plant is a large main-stem Columbia River hydroelectric development. The law requires that the Priest Rapids output be sold in neighboring States as well as in the State of Washington. To fulfill this requirement, it is necessary that the output of the plant be widely dispersed. A separate transmission system superimposed upon the Bonneville grid to effectuate such dispersion would be prohibitively expensive. It would be expensive not only to prospective purchasers of Priest Rapids power but also to the region as a whole from the standpoint of general transmission efficiency. By reason of wheeling,

however, it has been possible for the Grant County Public Utility District to sell power to 12 different utilities in amounts ranging from 2,523 kilowatts to 87,681 kilowatts, and at transmission distances from the plant varying from a few miles to 370 miles. This means that small as well as large distributing utilities can purchase Priest Rapids power; that utilities which are located at considerable distances from the plant can share its output with those which are located closer. Thus monopolization by reason of size or location is eliminated. This is a very important policy consideration, I feel.

Also on a policy basis, I feel that the Government should provide integrating transmission when desirable to encourage the development of new hydroelectric generating capacity with non-Federal funds. The funds needed for a new, large hydroelectric plant run into the hundreds of millions of dollars. If this investment is provided non-Federally, pressure for congressional appropriations is correspondingly reduced. Therefore, I feel that the much smaller appropriations required to permit wheeling over the Federal grid are well justified. In total they serve to reduce appropriations, not to increase them.

The Federal grid can carry additional blocks of power more efficiently and more economically than could a separate transmision system (which inevitably would duplicate in part, at least, the Federal system), because the Federal system has been designed as a bulk carrier. It achieves a high utilization of capacity and is operated in many sections at the more advanced voltages. The bulk-carrier principle has been basic to the design of BPA's system and has done much to create the widely acclaimed advantages of pooled electrical operations in the Northwest. I feel it is no exaggeration to say that non-Federal generating sources can be added economically to the region's power supply scheme only if the Federal grid, expanded as required, is made available for wheeling when such fits into an integrated network plan. This is the major economic consideration involved.

Contractual arrangements under which wheeling services will pay their full way have been developed. The Government's investments in wheeling capacity will be adequately safeguarded. The arrangements will benefit the entire region.

There need be no apprehension that the Government would be subsidizing non-Federal operations through this wheeling service. On the contrary, our apparently low charges for wheeling are based upon our actual costs. These, of course, reflect the pooling economies and the efficiencies of high utilization of facilities which are possible by reason of the fact that we operate a bulk-carrier, high-capacity, integrated system. While it is true that the Government can wheel, and plans to wheel, at substantially less cost, in most cases, to the utilities receiving wheeled power than would be the costs of their own separate facilities for this purpose, the difference is not a subsidy, in my opinion. Rather, it is a reflection of the economies of pooled operation previously mentioned, which the Congress has highly endorsed in the past.

Operation and maintenance

Our operation and maintenance program increase of $670,000 results from the additional facilities on our system and the increased complexity of power-pool operations. With this increase we can render an acceptable grade of utility service throughout our system.

CONSTRUCTION PROGRAM

The committee is aware of the fact that the construction appropriations granted to us represent sound, paying investments of Government funds. As of June 30, 1956, the repayment of the power-capital investment in the Federal power system of the Pacific Northwest was $77,145,485 ahead of schedule. As of this time, a total of $202,176,121 of the capital investment had been repaid from gross revenues, which aggregated almost $463 million. These gross revenues were applied, of course, to meet full costs of operation, maintenance, and interest of the generating plants and the transmission system, before application to the repayment of the investment.

A construction program of $25,142,000 is scheduled in fiscal year 1958. By components, this program consists of:

	Amount	Percent of total
Construction in progress	$13,921,000	55.4
New construction	10,634,000	42.3
General plant (tools and equipment)	587,000	2.3

"Construction in progress" provides for continuance of work on projects which you have previously approved. "New construction" provides for projects which are being initially recommended this year. These new projects are made necessary by customer-load growth and additions to generating capacity. Transmission facilities are recommended to accommodate the additional 1,700,000 kilowatts of Federal generating capacity which will come into operation between July 1, 1957, and July 1, 1961. Provision also is made for capacity to "wheel" over the Federal grid the output of two new non-Federal generating projects, under arrangements with the utilities concerned. These projects are Priest Rapids and Rocky Reach.

Some of the principal new items which we are recommending for construction are:

Columbia-Quincy No. 2 (item 140), a second 14-mile, 115-kilovolt transmission line from Columbia substation to Quincy, Wash., to supply the increased power requirements of the western part of Grant County.

Franklin-Walla Walla (item 162), a 230-kilovolt line approximately 36 miles long from Franklin substation to Walla Walla substation, to provide additional capacity to meet the power needs of the Walla Walla-Lewiston area.

Rocky Ford-Tacoma (item 171), a 156-mile, 287-kilovolt transmission line from Rocky Ford to Tacoma to accommodate changed power flows on the Federal grid resulting from Priest Rapids generation.

Cougar-Eugene (item 175), a 45-mile, 115-kilovolt line to deliver the output of the cougar hydroelectric plant to the main grid. A 16-mile section from Leaburg to Blue River is being accelerated to provide a temporary service arrangement for the Lane County Electric Cooperative.

Chief Joseph-Rocky Reach-Valley (item 180), planning and partial surveys in fiscal year 1958 for a major circuit from Chief Joseph via Rocky Reach, to the Puget Sound area, to integrate the Government's Chief Joseph plant and the new Rocky Reach plant of the Chelan County Public Utility District and to accommodate the increased power flows to the Puget Sound area.

South Bend area service (item 212), 5 miles of 115-kilovolt line from Raymond substation to South Bend, Wash., and a 12,000-kilovolt-ampere substation at South Bend, to supply the increasing power requirements of the Pacific County Public Utility District.

Southwestern Grant County service (item 243), the 12,000-kilovolt-ampere Jerico substation supplied by a 7-mile, 115-kilovolt tap, to serve the Grant County (Wash.) Public Utility District and the Bureau of Reclamation.

Spokane Valley area service (item 619), the 12,000-kilovolt-ampere Vera substation and a 4.5-mile, 115-kilovolt tapline, to supply the Vera Irrigation District and the Inland Power & Light Co.

Eagle Lake area service (item 620), the 6,000-kilovolt-ampere Eagle Lake substation, with a 10-mile, 115-kilovolt tapline, to serve the Big Bend Electric Cooperative (Washington) and the Bureau of Reclamation.

The above items, together with all others in our budget, result from joint engineering planning of the Administration and the concerned utilities, public and private. There is complete concurrence that the facilities proposed are required on the schedules indicated. Schedules of the interconnecting utilities for construction of related new subtransmission and distribution facilities mesh with the Federal schedules.

OPERATION AND MAINTENANCE PROGRAM

Because reliable electric service to a major portion of the Pacific Northwest depends upon the smooth functioning of our system, it is essential that our system be adequately operated and maintained. We endeavor to provide reliability of service which is comparable to utility standards, to protect our employees and equipment from hazards, and to keep our costs well within the range of comparable utility operations.

By far the greatest portion of our fiscal year 1958 operation and maintenance dollar—87.6 percent or $7,563,000—will be required for direct system maintenance, direct system operations, and related work. Of this amount, all but a small portion represents blue-collar activities.

About 3.7 cents of each of our revenue dollars in fiscal year 1958 will be used for direct system operations. For direct system maintenance we will require less than 1 cent per dollar of plant in service which, in 1958, will average about $411 million. Our total appropriation request for the operation and maintenance program represents 2.1 cents per dollar of plant in service.

As before stated, the 8.4 percent increase in our total program requirements from 1957 to 1958 is related to the growth of our facilities. Generating capacity

will be 12.5 percent greater in 1958. The value of transmission plant in service will be 8.6 percent higher.

BONNEVILLE BUDGET

Mr. PEARL. Bonneville's budget is divided into two parts: "Operation and maintenance" and "Construction."

(The following chart was submitted:)

Program and appropriation statistics

	Fiscal years					Increase, 1957 to 1958
	1954	1955	1956	1957	1958	
PROGRAMS						
Construction program:						
Regular program:						
New appropriations	$38,866,000	$24,193,875	$14,600,000	$18,700,000	$24,717,000	
Carryover	−4,877,901	836,039	9,377,782	4,643,652		
Total, regular program	33,988,099	25,029,914	23,977,782	23,343,652	24,717,000	$1,373,348
Civil-service retirement					425,000	
Total, construction program	33,988,099	25,029,914	23,977,782	23,343,652	25,142,000	
Operation and maintenance program:						
Regular program	5,938,609	6,216,869	6,771,827	7,595,000	8,265,000	670,000
Civil-service retirement					365,000	
Total, operation and maintenance program	5,938,609	6,216,869	6,771,827	7,595,000	8,630,000	
Reimbursements:						
Regular program	272,316	442,579	880,166	527,000	474,000	−53,000
Civil-service retirement					15,000	
Total, reimbursements	272,316	442,579	880,166	527,000	489,000	
Total, programs	40,199,024	31,689,362	31,629,675	31,465,652	34,261,000	
APPROPRIATIONS						
Construction	38,866,000	24,193,875	14,600,000	18,700,000	25,142,000	6,442,000
Operation and maintenance	6,004,000	6,231,692	6,775,000	7,595,000	8,630,000	1,035,000
Total, appropriations	44,870,000	30,425,567	21,375,000	26,295,000	33,772,000	7,477,000

ANTICIPATED PROGRAM

Mr. PEARL. Our programs as shown on the chart show what we expect to do in a given year in terms of obligation requirements.

Program levels differ from our appropriations requirements as we will show you. Our total construction program for the year 1954 was $33,988,099. In 1955, it was $25,029,914. In 1956, it was $23,977,782. For 1957, it was $23,343,652, and for 1958, on a basis comparable to 1957, we are planning a program of $24,717,000.

This shows you how our program for 1957 and our request for 1958 compare. We are asking for $1,373,348 more. I should say we are planning a program only that much larger for 1958, which is a small amount. These figures are on a comparable basis.

PAYMENT TO CIVIL SERVICE RETIREMENT FUND

In the past we have not paid the costs of civil service retirement from our funds. But in the year 1958, we will be required to. This

amounts to $425,000. When this is added to $24,717,000, we have our actual construction program requirements for 1958 of $25,142,000.

OPERATION AND MAINTENANCE PROGRAM

For our operation and maintenance program—and I will not bother to read all the figures, but they are given here for the past 5 years—for the present year, fiscal year 1957, we received $7,595,000. On a comparable basis, for the next year, 1958, we are asking for $8,265,000. This is an increase of $670,000.

The same thing applies here with respect to operation and maintenance as in the case of our construction. The civil service retirement costs will come from the Bonneville budget in 1958 for the first time, and they amount to $365,000. So, actually, the money required in 1958 will be larger by that amount.

This means that our program for 1958, the total program, will be $34,261,000.

Our new funds or new appropriations requests, show a material increase for the reason that in 1957 we had a carryover of between 4 and 5 million dollars. Likewise, funds for civil service retirement did not appear in that budget.

So, actually, by way of new funds, we are asking for $7,477,000 more in 1958 than we received in 1957.

A large amount of that is a result of a lack of carryover.

You will recall, Mr. Chairman, that we told you last year that we would not have a carryover this year. We will show you some figures a little later to indicate why we do not expect to have any carryover this year. We asked for the minimum we could live on, and we needed it all.

CONSTRUCTION BUDGET

Our construction budget is a function of new Federal generation that is coming in in the future. We have made the statement in the past that there is approximately one-half million kilowatts of new Federal generating capacity coming in each year for the next 4 or 5 years. That means our construction budget will be relatively constant for the next 4 or 5 years.

(The following chart was submitted:)

Peak generating capacity additions

[In thousands of kilowatts]

	In service July 1, 1957	Scheduled for installation, fiscal year 1958 budget period				Total in service July 1, 1961	Scheduled for later budget periods
		Fiscal year 1958	Fiscal year 1959	Fiscal year 1960	Fiscal year 1961		
FEDERAL PROJECTS							
Bonneville	570.0					570.0	
Grand Coulee	2,319.0					2,319.0	
Hungry Horse	328.0					328.0	
Detroit	115.0					115.0	
McNary	1,127.0					1,127.0	
Big Cliff	20.7					20.7	
Lookout Point	138.0					138.0	
Dexter	17.2					17.2	
Albeni Falls	49.0					49.0	
Chief Joseph	736.0	294.4	147.2			1,177.6	
Chandler	12.0					12.0	
The Dalles		358.8	358.8	358.8	179.4	1,255.8	
Roza		11.3				11.3	
Cougar					28.8	28.8	
Ice Harbor							310.5
Hills Creek							34.5
Total, Federal projects	5,431.9	664.5	506.0	358.8	208.2	7,169.4	345.0
NON-FEDERAL PROJECTS UNDER WHEELING ARRANGEMENTS							
Yale	133.0					133.0	
Box Canyon	69.0					69.0	
Pelton		120.0				120.0	
Swift, Nos. 1 and 2 [1]							
Mayfield				160.0		160.0	
Priest Rapids					[2] 312.9	[2] 312.9	
Rocky Reach							[3] 710.0
Total, non-Federal projects	202.0	120.0		160.0	312.9	794.9	710.0
Grand total	5,633.9	784.5	506.0	518.8	521.1	7,964.3	1,055.0
Cumulative grand total	5,633.9	6,418.4	6,924.4	7,443.2	7,964.3	7,964.3	9,019.3

[1] Initially the entire output of Swift Nos. 1 and 2 will be utilized by P. P. & L. Co. on nonwheeling basis. Later the Government will wheel the Cowlitz County Public Utilities District share of the output.
[2] Excludes 230,243 kilowatts reserved by Grant County Public Utilities District and 87,681 kilowatts purchased by P. P. & L. Co.
[3] Final determinations as to wheeling components pending.

NEW GENERATION

Mr. PEARL. This chart shows you that in the present year there will be coming in, and I am talking about our budget year, 644,500 kilowatts of new Federal generation.

In 1959 there will be 506,000. In 1960 there will be 358,800, and in 1961 there will be 208,200.

This is capacity that is authorized and is under construction on Federal budget schedules.

Senator MAGNUSON. You have those broken down as to the sources of supply.

Mr. PEARL. The Dalles accounts for the most of it. Of course, Roza, Cougar, Ice Harbor, and Hills Creek are also included. The latter two plants are not in the 1958 budget planning period which extends through fiscal year 1961.

WHEELING OF NON-FEDERAL POWER

As I started to say, our budget this year reflects wheeling. By that I mean wheeling of non-Federal power. By way of non-Federal generation coming into the Northwest during the budget period, the chart shows you the projects. Yale is in, Box Canyon is in. Pelton is coming in in November 1957 and we have approval to wheel that power by way of our budget requests last year.

We have, by way of new generation coming in, Tacoma's Mayfield plant. We have the Priest Rapids plant of the Grant County PUD. Likewise, we have the Rocky Reach plant of the Chelan County PUD.

So when you add Federal capacity and non-Federal capacity to be wheeled, you find that the amount of new generation which directly affects our system coming into the Northwest each year is a little more than one-half million kilowatts.

FINANCING OF ROCKY REACH

Senator MAGNUSON. Dr. Pearl, on the non-Federal projects, those are all under construction or in with the exception of Rocky Reach, which is in the preliminary stage of financing, too, is it not? There is some more financing to be done?

Mr. PEARL. Yes, there is. But, actually, Rocky Reach and Priest Rapids are both under construction.

Senator MAGNUSON. There is some construction, but there is also further financing, whereas Priest Rapids is fully financed.

Mr. PEARL. That is correct.

Senator MAGNUSON. I wanted the record to show that because I think that the importance of further financing of Rocky Reach bears directly upon these transmission lines.

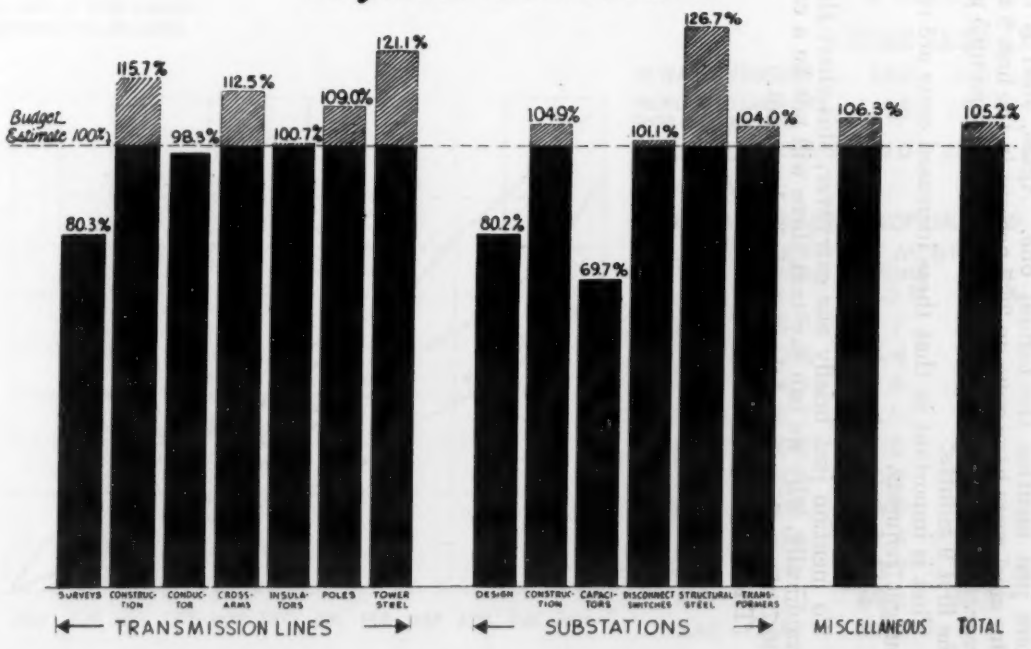
INCREASED COST

Mr. PEARL. In our budget, one major item that accounts for the increase from 1957 to 1958 is increased costs. We have made a chart to show you what has happened to us during our first 9 months of out present budget year.

(The following chart was submitted:)

BONNEVILLE POWER ADMINISTRATION

Actual Construction & Material Contract Awards Compared With Budget Estimates
July 1, 1956 to March 31, 1957



Mr. PEARL. The increased costs of line construction have amounted to 15.7 percent. Conductor has not increased, but, in fact, has decreased slightly. Crossarms material has increased 12.5 percent. I will mention some of the larger ones. Steel has increased 21.1 percent. Those figures apply to the transmission lines.

We have a similar condition in our substations materials. I will here just mention the highest one. Again, steel is the large one. Our steel costs have gone up 26.7 percent in the first 9 months of this year. As an overall average, our costs have gone up 5 percent during the first 9 months.

That is important in that these increased costs are reflected in our budget requests.

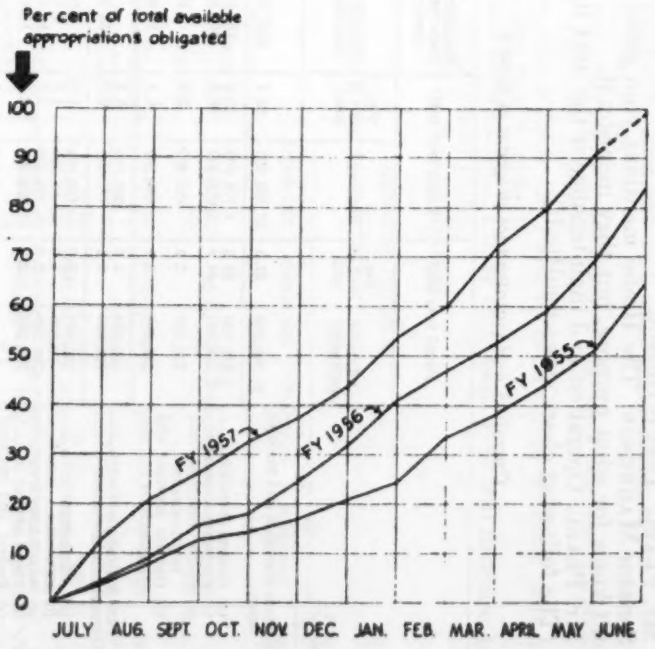
CARRYOVER SITUATION

To mention just briefly our carryover, this chart shows, I think, graphically, why we can say that there will not be a carryover from 1957 of anything more than a nominal amount.

(The following chart was submitted:)

BONNEVILLE POWER ADMINISTRATION

Utilization of Construction Appropriations



$ MILLIONS

	F.Y. 1955	F.Y. 1956	F.Y. 1957
NEW APPROPRIATIONS	24.2	14.6	18.7
UNOBLIGATED CARRYOVER FROM PREVIOUS YEAR	14.8	14.0	4.6
TOTAL AVAILABLE APPROP.	39.0	28.6	23.3

% OF TOTAL AVAILABLE APPROP. OBLIGATED
(CUMULATIVE BY MONTH)

	F.Y. 1955	F.Y. 1956	F.Y. 1957
JULY	4.1 %	3.5 %	12.4 %
AUG.	9.0	7.7	21.0
SEPT.	12.6	15.4	26.2
OCT.	14.1	17.8	32.6
NOV.	16.7	24.5	37.3
DEC.	20.8	31.8	43.8
JAN.	24.4	40.9	54.1
FEB.	33.3	46.9	60.1
MAR.	37.9	52.4	72.1
APR.	44.1	58.7	79.0
MAY	51.0	69.2	90.9
JUNE	64.1	83.9	

Mr. PEARL. In our fiscal year 1955, as of May, we had only obligated half of our available appropriations, just a little over 50 percent. In the fiscal year 1956, we had obligated 69.2 percent of our appropriations.

This year, as of now, we have completed our program and utilized our available appropriations almost 100 percent.

So our program has not increased much, but the funds we are requesting have increased, to a large extent, because of the carryover that we had available to use during 1957 that we will not have during 1958, as we have shown on this chart. We will have, at the end of this fiscal year, obligated almost 100 percent of our funds.

Senator MAGNUSON. That is for fiscal 1957?

Mr. PEARL. Yes.

Senator MAGNUSON. So, again, that carryover and the funds you are talking about now, they are specific funds that were appropriated in fiscal 1957 for construction?

Mr. PEARL. That is correct.

GROSS REVENUES

Senator MAGNUSON. That has nothing to do with your gross revenues?

Mr. PEARL. That is correct.

Senator MAGNUSON. The House mentions your gross revenues. I don't know for what purpose, but they mention it.

Mr. PEARL. Operation and maintenance is the next item.

(The following chart was submitted:)

Operation and maintenance program summary

	Fiscal year 1957		Fiscal year 1958		Requested increases fiscal year 1957 to fiscal year 1958		Distribution of total increase, percent
	Adjusted estimate [1]	Percent of total	Request [1]	Percent of total	Amount of increase	Percent increase	
1. System operation and maintenance	$6,946,000	87.3	$7,563,000	86.7	$617,000	8.9	92.1
(a) System operation	2,620,000	32.9	2,774,700	32.2	154,700	5.9	23.1
(b) System maintenance	3,569,900	44.9	4,016,200	46.5	446,300	12.5	66.6
(c) Power resources and requirements	210,700	2.6	215,900	2.5	5,200	2.5	.8
(d) General services and supervision	545,400	6.9	556,200	6.4	10,800	2.0	1.6
2. Power contracts and rates	290,000	3.6	290,000	3.4			
3. General administration	724,000	9.1	777,000	9.0	[2] 53,000	7.3	7.9
(a) Administration	156,900	2.0	159,100	1.8	2,200	1.4	.3
(b) Personnel	76,900	1.0	86,000	1.0	9,100	11.8	1.4
(c) Administrative services	180,000	2.2	195,500	2.3	15,500	8.6	2.3
(d) Fiscal services	206,700	2.6	221,500	2.6	14,800	7.2	2.2
(e) Budget and management	45,200	.6	47,500	.5	2,300	5.1	.3
(f) General services	58,300	.7	67,400	.8	9,100	15.6	1.4
Program total comparable basis	7,960,000	100.0	8,630,000	100.0	670,000	8.4	100.0

[1] Estimated cost of civil service retirement of $365,000 (initiated in fiscal year 1958) is included in both years for comparability.

[2] Of this increase $45,600, or all but $7,400, results from changes in percentage distribution between operation and maintenance and construction activities.

BREAKDOWN OF ACTIVITIES

Mr. PEARL. Our activities under this category of "operation and maintenance" are broken down, first, into the actual operating and maintenance of the Bonneville system. Generally speaking, these are the jobs of the men that actually operate and maintain the system, in other words, what we sometimes call the blue collar jobs.

Second, we have our power contracts and rates, and third, we have our general administration.

The increase that we are asking for in operation and maintenance is a function of a physical plant that is growing each year, and more work is required to operate and maintain it. The increase that we have asked for is actually almost all in that activity. As we have shown you on the chart, there is no increase in the funds we are requesting for power contracts and rates work. We are asking for an increase of 7.9 percent in general administration. That is not because we have increased that activity, but it is because of a bookkeeping allocation. More of our general expenses are being charged to operation and maintenance and less to construction.

Senator MAGNUSON. And there again you are dealing with your yearly fiscal appropriations?

Mr. PEARL. That is correct.

Senator MAGNUSON. And not with your gross revenues?

Mr. PEARL. That is correct.

Senator MAGNUSON. The gross revenues go back into the Treasury.

Mr. PEARL. Into the Treasury; yes.

Our increase also reflects the costs of the retirement fund that did not appear in last year's budget.

Operation and maintenance, I have said, each year will increase due to increase in the physical plant.

(The following chart was submitted:)

Operating statistics

	Fiscal year				Percent increase 1957 to 1958
	Actual 1955	Actual 1956	Estimated 1957	Estimated 1958	
Operation and maintenance requirements	$6,216,869	$6,771,927	[1] $7,960,000	$8,630,000	8.4
Substations [2]	158	174	178	185	
Transformer capacity (kilovolt-amperes: [3]					
230 kilovolts and lower	6,153,000	6,937,000	7,609,000	9,195,000	20.8
230/287 kilovolts and 230/345 kilovolts		400,000	400,000	1,600,000	
Transmission lines (structure miles) [2]	6,035	6,320	6,730	6,873	2.1
Electric plant in service [4]	$307,476,000	$344,217,000	$378,515,000	$410,902,000	8.6
Points of delivery [2]	307	330	331	346	
Energy sales (kilowatt-hours)	21,828,000,000	25,974,000,000	28,800,000,000	31,600,000,000	9.7
Revenues (BPA only)	$51,978,055	$60,833,997	$67,500,000	$74,409,000	10.2
Generating plants in operation [2]	6	9	11	11	
Federal generating capacity (peaking kilowatts)	[3] 3,674,700	4,184,600	4,829,300	5,431,900	12.5

[1] 1957 base is adjusted to compare with 1958 by including $365,000 for employee retirement fund which is carried in appropriation request initially in 1958 under Public Law 854.

[2] Beginning of year.

[3] Average over year.

PHYSICAL PLANT

Mr. PEARL. To show you some of the items that illustrate this, we have a chart here in which we have shown you our operation and maintenance requirements for the last 3 years, and our request for fiscal 1958.

Now for our physical plant. The number of substations we will man next year will be 185. This year we are actually operating 178. The transformer capacity at 230 kilovolts and lower voltages in 1958 will be over 9 million kilovolt-amperes. This year it is between 7 and 8 million.

The other physical factors we have shown here are an attempt to show you the growth in the physical plant that necessitated asking for an increase in operation and maintenance. I do not think it is necessary for me to go into any more detail.

REVENUES COVERED INTO TREASURY

I will mention, since you mentioned revenue, Senator Magnuson, we will sell this year, about 28,800 million kilowatt-hours, and next year we expect to sell 31,600 million kilowatt-hours.

Senator MAGNUSON. So that this is clear, all that revenue, with the contract with the Government and with Bonneville, goes back into the Treasury?

Mr. PEARL. All the funds we take in are turned into the Federal Treasury. We, in turn, then request funds to operate.

Senator MAGNUSON. A lot of people up on the floor do not quite understand that. This is merely for funds to operate the so-called business of Bonneville power, which takes in X number of dollars which is turned into the Treasury.

If this were a private business, this would be taken out of the gross revenue, is that correct?

Mr. PEARL. That is correct.

Senator MAGNUSON. And every year, with more kilowatts coming on the line, the operating and maintenance costs naturally increase. You are doing more business.

Mr. PEARL. That is correct. As the physical plant increases, the revenue increases and the costs increase.

Senator MAGNUSON. For instance, in 1957, the transformer capacity was 7,609,000 kilowatts. It will be 9,195,000 for 1958.

Mr. PEARL. That is correct.

I think that is all the detail, unless there is a question.

Senator MAGNUSON. The percentage increase will be 20.8 percent more work to do and more capacity, and selling over 9.7 percent more power.

Mr. PEARL. That is correct.

Chairman HAYDEN. The original budget estimate for construction——

LOADS AND RESOURCES OF NORTHWEST

Mr. PEARL. Would you be interested in my covering the loads and resources of the Northwest as we have done in the past?

Senator MAGNUSON. I know about it, and I believe Senator Hayden is pretty well versed, but if we put that into the record so that if anybody asks the question, we will have the figures.

Mr. PEARL. When I appeared before the Chudoff committee, they asked me if I kept Congress informed of the power situation out there, and I said "Yes, every time we present our budget, we give them this information."

Chairman HAYDEN. I think you better put it into the record.

Mr. PEARL. We will just enter it into the record.

(The information referred to follows:)

Federal and non-Federal loads and resources—West group power pool area [1]—Average energy during storage drawdown period

[In thousands of kilowatts]

	1956–57	1957–58	1958–59	1959–60	1960–61	1961–62	1962–63	1963–64	1964–65	1965–66	1966–67
Load:											
Firm [2]	4,577	4,951	5,337	5,668	5,986	6,302	6,658	7,005	7,392	7,806	8,244
Interruptible	564	625	669	669	669	669	669	669	669	669	669
Total	5,141	5,576	6,006	6,337	6,655	6,971	7,327	7,674	8,061	8,475	8,913
Hydro resources only:											
Critical year	4,191	4,574	4,997	5,275	5,661	6,008	6,624	6,621	6,622	6,619	6,620
Median month year	4,862	5,278	5,769	6,209	6,675	7,085	7,861	7,858	7,861	7,861	7,861
Surplus or (deficit):											
Critical year (based on firm load only)	(386)	(377)	(340)	(393)	(325)	(294)	(34)	(384)	(770)	(1,187)	(1,624)
Median month year (based on total load)	(279)	(298)	(237)	(128)	20	114	534	184	(200)	(614)	(1,052)
All resources including steam and possible imports:											
Critical year	4,774	5,174	5,741	5,882	6,197	6,592	7,141	7,136	7,208	7,130	7,051
Median month year	5,459	5,914	6,569	6,871	7,266	7,745	8,456	8,427	8,563	8,488	8,408
Surplus of (deficit):											
Critical year (based on firm load only)	197	223	404	214	211	290	483	131	(184)	(676)	(1,193)
Median month year (based on total load)	318	338	563	534	611	774	1,129	753	502	13	(505)

[1] Includes most of Oregon, all of Washington, northern Idaho, and western Montana.

[2] Includes transmission losses.

CONSTRUCTION

Chairman HAYDEN. The original budget estimate for construction was $30,800,000. However, the estimate was reduced to $25,142,000 in an amendment to the budget submitted to the House in House Document No. 162. The House committee recommended an appropriation of $19,879,000, a reduction of $5,263,000. The justification will be placed in the record.

(The justification referred to follows:)

Analysis of adjusted appropriation

	Total available, 1957 (1)	Increase in base due to Government's contribution to the retirement fund (2)	Adjusted appropriation (3)
1. Construction in progress	$9,896,000	$369,000	$10,265,000
2. New construction	8,383,000	48,000	8,431,000
3. General plant	421,000	8,000	429,000
Total	18,700,000	425,000	19,125,000

Analysis by activities

Activities	Adjusted appropriation	Estimate, 1958
1. Construction in progress	$10,265,000	$13,921,000
2. New construction	8,431,000	10,634,000
3. General plant	429,000	587,000
Total	19,125,000	25,142,000

1958 construction program summary

Item No. and facility	Estimated cost	Obligations, fiscal year 1957	Obligations, fiscal year 1958				Obligations required to complete
			Construction in progress	New construction	General plant	Total	
100 major grid:							
108 Chief Joseph-Snohomish No. 3 and Chief Joseph-Covington No. 1	$25,211,000	$2,698,000	$572,000			$572,000	$25,000
109 Lower Olympic Peninsula service	4,494,000	621,000	216,000			216,000	11,000
113 Snohomish substation and line additions	1,977,000	231,000	679,000			679,000	39,000
116 The Dallas area service	6,743,000	1,241,000	817,000			817,000	331,000
118 McNary-Ross	13,741,000	162,000					
119 Southeast Portland area service	16,266,000	428,000	75,000			75,000	8,000
122 Ross-St. Johns-Keeler	3,520,000	485,000					
124 Snohomish-Sedro Woolley area service	208,000			$60,000		60,000	148,000
125 Oregon City-Chemawa	1,545,000	643,000	154,000			154,000	3,000
129 Round Butte-Redmond	898,000	413,000	433,000			433,000	
131 Santiam-Alvey No. 2	3,597,000	1,324,000	1,771,000			1,771,000	399,000
132 Coos Bay area service	2,705,000	226,000	119,000			119,000	117,000
134 Alvey-Reston	5,471,000	1,706,000	621,000			621,000	
136 McNary-Franklin	1,998,000	483,000	91,000			91,000	
138 Sand Dunes-Neppel	618,000			204,000		204,000	414,000
139 Eastern Grant County service	2,390,000	1,053,000	1,189,000			1,189,000	71,000
140 Columbia-Quincy No. 2	401,000			64,000		64,000	337,000
142 Columbia substation additions	1,477,000	257,000					
143 Spokane area service	1,456,000	152,000					
144 Columbia series capacitors	963,000	617,000	289,000			289,000	57,000
150 System reactive facilities	6,054,000	934,000	375,000	2,052,000		2,427,000	1,493,000
151 Main system neutral boosters	452,000	85,000		81,000		81,000	47,000
162 Franklin-Walla Walla	4,250,000			484,000		484,000	3,242,000
171 Rocky Ford-Tacoma	8,594,000			1,863,000		1,863,000	6,731,000
175 Cougar-Eugene	2,120,000			777,000		777,000	1,343,000
178 Covington transformer replacement	1,215,000			862,000		862,000	353,000
180 Chief Joseph-Valley	14,910,000			296,000		296,000	14,614,000
Subtotal	133,274,000	13,759,000	7,401,000	6,743,000		14,144,000	29,783,000
200 Seattle area:							
204 Upper Olympic Peninsula service	2,430,000	916,000	895,000			895,000	241,000
209 Olympia-Aberdeen No. 2	1,517,000	498,000	573,000			573,000	138,000
212 South Bend area service	328,000			222,000		222,000	93,000
215 Lewis County service	1,635,000	204,000	282,000			282,000	43,000
218 Ilwaco-Long Beach area service	867,000	113,000					
219 Raymond-Aberdeen	1,167,000	43,000					
220 Larson substation	252,000	130,000	114,000			114,000	
223 Moses Lake service	237,000	55,000					
227 Frenchman Hills area service	497,000	238,000					
239 Warden substation additions	58,000	21,000					

240	Nilles Corner substation	78,000	61,000				
241	Ephrata service	267,000	160,000	95,000		95,000	
243	Southwestern Grant County service	312,000			171,000	171,000	141,000
299	Other transmission facilities	697,000	229,000	32,000	183,000	215,000	40,000
	Subtotal	10,342,000	2,668,000	1,991,000	576,000	2,567,000	696,000
300	Portland area:						
303	Longview substation additions	975,000	366,000				
312	Longview area service	921,000	48,000				
318	Keeler-Forest Grove No. 2	394,000	216,000	65,000		65,000	
325	Tillamook service	1,927,000	167,000				
329	Oregon City substation terminal	97,000	25,000	22,000		22,000	27,000
334	Eugene-Reedsport area service	1,734,000	79,000				
349	Boyer-Tillamook conversion	645,000	313,000	202,000		202,000	
352	Reedsport sectionalizing circuit breaker	122,000	26,000	73,000		73,000	
354	Coos Tap Point	113,000	15,000	62,000		62,000	10,000
355	Toledo area service	3,537,000	770,000	1,767,000		1,767,000	870,000
371	Alvey terminal	125,000			125,000	125,000	
399	Other transmission facilities	1,231,000	465,000	188,000	239,000	427,000	36,000
	Subtotal	11,821,000	2,490,000	2,379,000	364,000	2,743,000	943,000
600	Spokane area—upper portion:						
619	Spokane Valley area service	322,000			180,000	180,000	142,000
620	Eagle Lake area service	348,000			215,000	215,000	133,000
627	Clarkston substation	97,000	74,000				
628	Bonners Ferry sectionalizing circuit breaker	69,000	51,000				
635	Columbia Falls-Trego	993,000	449,000	368,000		368,000	49,000
699	Other transmission facilities	407,000	176,000	12,000	124,000	136,000	17,000
	Subtotal	2,236,000	750,000	380,000	519,000	899,000	341,000
700	Spokane area—lower portion:						
702	Grandview substation additions	245,000	114,000				
710	Franklin transformer replacement	187,000	23,000				
712	Grandview substation transformer replacement	70,000	18,000				
713	Big Eddy-DeMoss	832,000	398,000	415,000		415,000	
715	Ringold transformer replacement	106,000	30,000				
716	Goldendale substation	287,000	51,000	142,000		142,000	
717	Hedges substation	223,000	128,000	69,000		69,000	18,000
718	McNary-Richland direct line completion	109,000	23,000	86,000		86,000	
799	Other transmission facilities	587,000	177,000	37,000	104,000	141,000	14,000
	Subtotal	2,646,000	962,000	749,000	104,000	853,000	32,000

1958 construction program summary—Continued

Item No. and facility	Estimated cost	Obligations, fiscal year 1957	Obligations, fiscal year 1958				Obligations required to complete
			Construction in progress	New construction	General plant	Total	
800 General system facilities:							
810 General structures and improvements	$1,263,000	$339,000	$194,000	$266,000		$460,000	$87,000
820 Communications facilities	2,460,000	489,000	495,000	156,000		651,000	208,000
830 Tools and equipment	1,544,000	550,000			$587,000	587,000	
840 Preliminary engineering studies	492,000	141,000		240,000		240,000	
860 Portable emergency transformers	614,000	113,000					
871 Transformer additions	5,159,000	654,000	332,000	1,323,000		1,655,000	1,443,000
880 Circuit-breaker replacements	603,000			343,000		343,000	260,000
Subtotal	12,135,000	2,286,000	1,021,000	2,328,000	587,000	3,936,000	1,998,000
Miscellaneous cleanup work	429,000	429,000					
Subtotal construction program	172,883,000	23,344,000	13,921,000	10,634,000	587,000	25,142,000	33,793,000
Fiscal year 1956 obligations chargeable to items terminated in fiscal year 1956 and therefore not in 1957 or 1958 program							
Total construction program		23,344,000	13,921,000	10,634,000	587,000	25,142,000	33,793,000
Utilization of carryover from prior fiscal years		−4,644,000					
Appropriation or estimate		18,700,000	13,921,000	10,634,000	587,000	25,142,000	33,793,000

JUSTIFICATION

The fiscal year 1958 construction program of $25,142,000 compares with a program of $23,344,000 in fiscal year 1957. Appropriation requirements in fiscal year 1958 are $25,142,000 compared with fiscal year 1957 appropriations of $18,700,000 and $4,644,000 carried over from fiscal year 1956.

This construction program of the Bonneville Power Administration provides not only for the additional main grid transmission capacity required to transmit the output of new Federal generators being placed in operation at Chief Joseph, The Dalles, and Roza Dams prior to January 1961, it also provides for additional capacity needed to wheel new non-Federal power supplies, in accordance with the comprehensive policy for water resources development, in order that the most economical transmission arrangements will prevail on a regional basis.

The Federal main grid now serving the Pacific Northwest can be readily amplified to form an integrated network serving the new non-Federal projects. Previous recent authorizations for additions to the main grid have provided outlets for the Cowlitz River project of the Tacoma City Light and the Pelton project of the Portland General Electric Co. New non-Federal projects underway are the Priest Rapids project of the Grant County Public Utility District, and the Rocky Reach project of the Chelan County Public Utility District.

The Federal main grid will, in addition to serving these new non-Federal projects, be able to perform under conditions of shifting loads, changing flows of power under seasonal and emergency operating conditions, and interchanges of power between members of the power pool.

New construction in fiscal year 1958 is geared to the target date of January 1961 as from 3 to 3½ years are required for economical construction of the typical main grid transmission line. An exception to this is a line crossing the Cascade range where snow and bad weather limit construction work to a few summer months; 4½ years is required for this project. The 1958 program also provides for facilities of lesser scope on shorter construction schedules reflecting current experience. Plans for all electrical facilities are related to projected load conditions and match generation schedules of the Bureau of Reclamation and the Corps of Engineers.

At the end of fiscal year 1956 there were 7,200 circuit miles of transmission lines in service. Work underway and new facilities proposed in this budget will add 1,100 miles of line. Thus by January 1961 the transmission system will encompass 8,300 circuit miles of transmission lines.

Basis for cost estimates

Estimates for the fiscal year 1958 construction program were prepared using cost levels of the period January to July 1956. It is expected that material and labor costs will, in general, increase slightly over the next 18 months.

Customer service items

All proposed customer service budget items have been developed jointly by the staffs of the Bonneville Power Administration and its customers. These items, which have been shown to be needed by joint Administration-customer studies, represent that part of the total new facilities which it is the Administration's responsibility to provide under its customer service policy. Construction by customers of related new subtransmission and distribution facilities necessary to carry the power from Administration points of delivery to ultimate consumers has been agreed upon and scheduled in conjunction with the joint studies. Energization dates proposed for Administration facilities match these customer's schedules for construction of their own facilities.

Also, all proposed items exceed the Administration's standards of minimum feasibility. That is, estimated cumulative revenues from the sale of power through the new facilities during the initial 10-year period of service are sufficient to cover total annual costs of the specific facilities, and, in addition, to contribute to the costs of generation and main grid transmission.

Major grid

The major grid facilities included in the Administration's fiscal year 1958 construction request result from detailed engineering and analyzer-board studies of the combined transmission systems of the region, made in cooperation with the major electric utilities. Schedules of generator installations of the Corps of Engineers and the Bureau of Reclamation, as well as schedules for new non-Federal projects, the output of which will be integrated with the Federal generating

system and wheeled in part over the Federal grid, form the generation base for these studies. Agreed-upon load estimates developed by or in cooperation with the utility distributors of the region, form the load base.

The proposed system additions provide an economical means by which the power flows may be carried by the Bonneville grid, operating integrated with the other systems of the Northwest power pool. These new transmission additions together with certain planned non-Federal system additions will represent the most efficient and reliable means of supplying the regional loads from the new Federal and non-Federal hydroelectric projects. The proposed new Federal transmission projects are based on the assumption that several non-Federal transmission projects will be completed within the budget period prior to January 1961. These projects include the following circuits: Priest Rapids-Midway, Midway-Yakima, Lewiston-Walla Walla, and Pelton-Round Butte. If these non-Federal transmission schedules are not effectively met it will be necessary for the Administration to revise the transmission plans included in this budget program.

A total of 1,737,500 kilowatts of peaking capacity is scheduled to be added on the Federal system during the period covered by this proposed construction program. Of this total, 664,500 kilowatts will be added in fiscal year 1958, 506,000 kilowatts in fiscal year 1959, 358,800 kilowatts in fiscal year 1960, and 208,200 kilowatts in fiscal year 1961. This will bring the total peaking generating capacity on the Federal system at the end of fiscal year 1961 to 7,169,400 kilowatts. The transmission system is, of course, designed to utilize fully this total generating capacity under the planned method of operation.

In addition 592,900 kilowatts of non-Federal generation for which wheeling is contemplated will be added during the period from July 1957 to July 1961. The projects are: Pelton, Priest Rapids, and Mayfield.

To achieve this utilization, the Federal transmission system, broadly speaking, must meet two requirements: (1) There must be sufficient capacity to supply maximum yearly peak loads, which generally occur in the months of December or January, and (2) there must be sufficient capacity between each generating plant and the grid to utilize the full maximum capability of the plant.

The following table shows the maximum peaking capability of each generating plant on the system before and at the close of the budget period:

Peak generating capacity additions

[In thousands of kilowatts]

	End of fiscal year 1957	End of fiscal year 1961	Increase
Federal projects:			
Bonneville	570.0	570.0	
Grand Coulee	2,319.0	2,319.0	
Hungry Horse	328.0	328.0	
Detroit	115.0	115.0	
McNary	1,127.0	1,127.0	
Big Cliff	20.7	20.7	
Lookout Point	138.0	138.0	
Dexter	17.2	17.2	
Albeni Falls	49.0	49.0	
Chief Joseph	736.0	1,177.6	441.6
Chandler	12.0	12.0	
The Dalles		1,255.8	1,255.8
Roza		11.3	11.3
Cougar		28.8	28.8
Total Federal projects	5,431.9	7,169.4	1,737.5
Non-Federal projects:			
Yale	133.0	133.0	
Box Canyon	69.0	69.0	
Pelton		120.0	120.0
Mayfield		160.0	160.0
Priest Rapids		312.9	312.9
Total non-Federal projects	202.0	794.9	592.9
Grand total	5,633.9	7,964.3	2,330.4

ESTIMATED 1958 REVENUES

Senator MAGNUSON. I want the record to show where we are discussing the revenues and the power capacity, that the revenues from

Bonneville power are estimated for 1958 to be $74,400,000. That is the estimate.

Mr. PEARL. That is our estimate of our revenue for next year.

Chairman HAYDEN. With respect to the recommendations of the House committee, it is the view of the Chair that the specific facilities allowed should be fully discussed today.

As to the other reductions, I will ask the Department to analyze the effect on the program and to submit its comments later in the usual manner.

The estimate of $25,142,000 includes $13,921,000 for the continuation of construction of projects previously approved by the Congress. The balance, $10,634,000, is programed for new construction.

Would you please submit for the record statements on the principal new starts included in the estimate?

Mr. PEARL. We will do that.

SUMMARY STATEMENTS OF PRINCIPAL FISCAL YEAR 1958 MAIN SYSTEM NEW STARTS

Snohomish-Sedro Moolley area service (item 124)

A 4-mile, 115-kilovolt line, with terminal facilities, is required from the Administration's Snohomish substation to one of Pudget Sound Power & Light Co.'s Beverly Park-Sedro Wooley 115-kilovolt lines northwest of Snohomish to provide additional interconnection capacity with the company. These facilities are scheduled for energization in July 1959.

The company is now served over two 115-kilovolt lines between the Snohomish and Beverly Park substations. A third circuit is under construction from Snohomish to the Company's Eastside substation. The combined capacity of these lines and the proposed new line will be needed to carry area loads in the fall of 1959.

Sand Dunes-Neppel (Item 138)

This proposed facility, consisting of a switching station at Neppel and 9 miles of 115-kilovolt line to this station from Sand Dunes switching station, will tie together the Administration's 115-kilovolt lines to the north and south of the city of Moses Lake, Wash. The Grant County Public Utility District, the Bureau of Reclamation and the Washington Water Power Co. will be served or interconnected by this proposed facility. Energization is scheduled for July 1959.

These new facilities will complete major transmission required for supply to the area.

Columbia-Quincy No. 2 (Item 140)

This item provides for a second 14-mile, 115-kilovolt transmission line between the Columbia and Quincy substations, with terminal equipment, to supply the increased power requirements of the western part of Grant County. These facilities are required by May 1959.

The rapidly growing Columbia Basin irrigation project in Grant County is causing a marked stimulation of the economy of the area and a consequent increase in power demands. Load estimates for the summer of 1959 exceed the capacity of the existing Columbia-Quincy circuit.

Main System Neutral Boosters (item 151)

It is necessary to install a booster transformer bank in the neutral of transformer bank No. 2 at Longview substation to permit raising the system operating voltage and also to supply the increased power requirements of the Reynolds Metals Co. Energization is scheduled for April 1959.

The booster bank will make it possible to raise the operating voltage of the 230-kilovolt grid and control the low-side voltage, with the result that transmission system losses will be reduced and capability increased. The installation will also increase the 230–13.8-kilovolt transformer capacity.

Franklin-Walla Walla (item 162)

A 230-kilovolt line approximately 36 miles long with two 230-kilovolt terminals is required from Franklin substation to Walla Walla substation, to provide additional capacity to meet the power needs of the Walla Walla-Lewiston area. This

item also includes the installation of a 75,000/100,000-kilovolt-amperes, 230–115/69 kilovolt transformer at Walla Walla substation. The transformer to be used will be transferred from Covington substation. Energization of the line is scheduled for May 1960 and the Walla Walla transformer is tentatively scheduled for installation in the fall of 1961.

The proposed line is a part of a joint plan of the administration and the Washington Water Power Co. for a 230-kilovolt circuit from Franklin to Lewiston. The company will construct the portion between Walla Walla and Lewiston. The transformer at Walla Walla is needed for local loads.

Rocky Ford-Tacoma (item 171)

A 156-mile, 287-kilovolt transmission line with terminal facilities from Rocky Ford to Tacoma is required to accommodate changed power flows on the Federal grid resulting from Priest Rapids generation. This line is scheduled for energization in September 1960, for initial operation at 230 kilovolts.

The line will integrate the Priest Rapids hydroelectric plant of the Grant County Public Utilities Department with the Bonneville system, and will provide part of the additional capacity required for wheeling Priest Rapids power.

Cougar-Eugene (item 175)

A 16-mile, 115-kilovolt transmission line from Leaburg to the vicinity of Blue River, Oreg., is required for service to the Lane County Electric Cooperative. This line will be an intermediate section of the 45-mile Cougar-Alvey line, which is required to transmit the output of the Cougar hydroelectric generating plant into the Federal grid. Energization of this initial intermediate section is scheduled for not later than the fall of 1959, for temporary operation at lower voltage. Energization of the complete line at 115-kilovolts is scheduled for October 1960 to coincide with the commencement of operation of the Cougar plant. At that time, a 6,000-kilovolt-ampere, 115–12.5-kilovolt substation will be constructed in the vicinity of Cougar Dam to provide permanent service to the Cooperative.

Covington transformer replacement (item 178)

This item covers the installation of a 150,000/200,000/250,000-kilovolt-ampere, 230/115-kilovolt autotransformer bank at Covington. This installation will release the two 75,000/100,000, 230/115/69-kilovolt transformer banks presently installed there for transfer to Chehalis and Walla Walla substations. The schedule for installing the autotransformer bank is July 1959.

The two 75,000-kilovolt-ampere, 230–115/69-kilovolt transformer banks now in service at the Covington substation have characteristics suitable to provide the additional transformer capacity required at Chehalis and Walla Walla. An economic study shows that $150,000 in investment costs will be saved by the proposed plan (the purchase of a 150,000-kilovolt-ampere, 230/115-kilovolt autotransformer for Covington to release the two present banks for installation at Chehalis and Walla Walla), rather than purchasing new banks for Chehalis and Walla Walla.

Chief Joseph-Rocky Reach-Valley (item 180)

Planning and partial surveys are required in fiscal year 1958 for a major circuit from Chief Joseph, via Rocky Reach, to the Puget Sound area, to integrate the Government's Chief Joseph plant and the new Rocky Reach plant of the Chelan County Public Utility District and to accommodate the increased power flows to the Puget Sound area which will occur by the fall of 1961.

This circuit will traverse rugged mountain terrain with difficult access, where the construction period is confined to a few summer months in the high elevations. Therefore, surveys in these areas must be started in fiscal year 1958 to construct this line economically.

The Administration is collaborating closely with the Chelan County Public Utility District and the Puget Sound Power & Light Co. with respect to the integration of the 700,000-kilowatt Rocky Reach hydroelectric generating plant. This plant is scheduled for initial operation in the fall of 1961. While the joint studies have not yet been completed and no decisions yet reached with respect to the precise nature of the facilities and ownership, it is agreed that planning and surveys must be accelerated in fiscal year 1958 in order to allow adequate time for the construction of the circuit.

If it is decided that this circuit or any section of it are to be constructed non-Federally, the Government will negotiate reimbursement of any expenditures which it has made for surveys.

Big Eddy-Keeler (item 126)

Due to an oversight, when this facility was deferred as part of the fiscal year 1958 amendment, provision was not made for orderly completion of the right-of-way acquisition of the section from Oregon City to Keeler. Since this right-of-way is already partially acquired, and since it crosses an area which is rapidly becoming heavily suburbanized, it is proposed to complete the acquisition, by a program adjustment, over the fiscal years 1958 and 1959. It is estimated that the cost of the acquisition will not exceed $50,000 during fiscal year 1958. This oversight was not discovered until after the Administration's hearings before the House Appropriations Subcommittee were completed.

SUMMARY STATEMENTS OF FISCAL YEAR 1958 CUSTOMER SERVICE NEW STARTS

South Bend area service (item 212)

This item provides for construction of 5 miles of 115-kilovolt line from the Raymond substation to the northeastern city limits of South Bend, Wash., and a 12,000-kilovolt-ampere, 115–12.5-kilovolt substation at South Bend (the Willapa River substation). These facilities will provide for the increasing power requirements of the Pacific County Public Utility District, and are scheduled for energization in October 1958.

Southwestern Grant County service (item 243)

This item covers construction of 7 miles of 115-kilovolt line from a tap on the Administration's Burke-Royal line to approximately 13 miles south of Burke substation, and construction there of a 12,000-kilovolt-ampere, 115-13.8-kilovolt substation (the Jericho substation), which will serve the Grant County Public Utility District and the Bureau of Reclamation. These facilities are scheduled for energization in December 1958.

Power requirements in the area to be served by the proposed Jericho substation will increase rapidly within the next few years since this part of the Columbia Basin project is scheduled to have irrigation water available in 1959. The general activity associated with the Priest Rapids hydroelectric development of the Grant County Public Utility District will also contribute to load growth.

Royal substation terminal (item 299)

The construction of a 13.8-kilovolt feeder position in the Administration's Royal substation for service to the Bureau of Reclamation is covered in this item. Energization is scheduled for April 1959.

The Bureau will serve its Hope Valley and Low Gap pumping plants from Royal substation, which is scheduled for completion in March 1957, and will make a nonappropriation cost transfer to the Administration to cover construction of the proposed 13.8-kilovolt feeder position.

Alvey terminal (item 371)

A 115-kilovolt terminal position in the Administration's Alvey substation is required to serve the increasing power requirements of the city of Eugene's Water and Electric Board. Energization is scheduled for September 1958.

The Eugene Water and Electric Board which serves all the power requirements of the city of Eugene, presently receives power from the Administration from Eugene substation at 69 kilovolts. The proposed 115-kilovolt point of delivery at Alvey substation will take the place of additional transformation at the Administration's Eugene substation.

Spokane Valley area service (item 619)

This item provides for construction of a 4.5-mile, 115-kilovolt line from a tap on the Administration's Trentwood-Valley Way line to approximately 2 miles south of Veradale in the Spokane Valley, and at that location construction of a 12,000-kilovolt-ampere, 115-12.5-kilovolt substation, to be known as Vera substation, which will serve the Vera Irrigation District and the Inland Power & Light Co. Energization of these facilities is scheduled for December 1958.

Loads of the Vera Irrigation District and the Inland Power & Light Co. in the Spokane Valley area are served from the Administration's Valley Way substation and are increasing rapidly due to industrial and commercial expansion, together with residential growth.

Eagle Lake area service (item 620)

This service plan includes construction of the 6,000-kilovolt-ampere, 115-12.5-kilovolt Eagle Lake substation about 6 miles south of Othello, Wash., supplied by approximately 10 miles of new 115-kilovolt transmission line from the Adminis-

tration's Scooteney substation. The new substation will serve the Big Bend Electric Cooperative and the Bureau of Reclamation. Energization is scheduled for May 1959.

The power requirements of the area to be served from the proposed substation, part of the Columbia Basin project, will increase rapidly because of additional land being brought under irrigation by the Bureau of Reclamation.

Transformer additions (item 871)

This item provides for additional transformer capacity in existing substations where loads will exceed the present capacities, as follows:

Substation	Capacity in kilovolt-amperes		Energization date
	Present	Planned	
Centralia	6,000	12,000	July 1958.
Chehalis	19,500	75,000	October 1959.
Ellensburg	10,000	22,000	June 1959.
Lone Pine	2,000	4,000	December 1958.
Soap Lake	6,000	12,000	August 1958.
Bandon	6,000	12,000	Do.
Cowlitz	37,500	75,000	May 1959.
Lebanon	3,000	6,000	Do.
Mapleton	6,000	18,000	July 1959.
Do		6,000	Do.
McMinnville	12,000	24,000	Do.
Mill Plain	24,000	32,000	Do.
Svenson	1,000	3,000	July 1958.
Wren	3,000	6,000	June 1959.
Highlands	12,000	32,000	September 1959.
Hood River	6,000	12,000	May 1959.
Pendleton	1,000	3,000	June 1958.
Riverview	12,000	24,000	June 1959.

A contingency in the amount of $100,000 is included to cover the additional transformers which invariably must be purchased or installed during each budget year, but for which the specific locations cannot be definitely established at the present time.

Senator MAGNUSON. And, Dr. Pearl, your statement has been put into the record in full.

WHEELING OF NONFEDERAL GENERATION

Chairman HAYDEN. I note the following paragraph on page 28 of the justification.

This construction program of the Bonneville Power Administration provides not only for the additional main grid transmission capacity required to transmit the output of new Federal generators being placed in operation at Chief Joseph, the Dalles and Roza Dams prior to January 1961, it also provides for additional capacity needed to wheel new non-Federal power supplies in accordance with the comprehensive policy for water resources development, in order that the most economical transmission arrangements will prevail on a regional basis.

I understand that the original budget included funds for three projects that were primarily for the wheeling of non-Federal generation. One of these three, budget item 174, Longview Substation Terminal, was deleted in the amendment to the budget.

FACILITIES DISALLOWED BY HOUSE

Would you please comment on the remaining two facilities involved? They are budget item 171, Rocky Ford-Tacoma, and budget item 180, Chief Joseph-Reach Valley. These are the facilities that the House committee recommended be disallowed.

ROCKY FORD-TACOMA LINE

Mr. PEARL. The first item that they recommended be disallowed is the Rocky Ford-Tacoma line. That line is a line that is needed for Federal power, and will wheel some non-Federal power from Priest Rapids.

We made a little check and we found that about 75 percent of the power that will flow over that line is Federal power and about 25 percent is wheeled power from Priest Rapids. I would like to have these figures in the record.

This wheeling, we think, is very important, because of the benefits that accrue to the Government as a result.

The wheeling of this power and the benefits of integration, result in many advantages as far as the Government is concerned. The location of Priest Rapids is such that if we wheel the power from Priest Rapids, the plant will, in reality, serve the Government's loads in the Hanford area, and the power that would normally flow into that area from Federal plants will then be available to flow over to the load centers on the coast. This means a material saving to the Federal Government by way of electrical losses.

We estimate that power and reactive losses that we will save would amount to $410,000 per year. The actual annual cost of the line that we are proposing will be only $324,000. So there will be a net saving to the Government of $86,000. But in addition to this, the charge for wheeling power over the line will amount to about $93,000 per year. So, actually, that will mean, by way of benefits to the Government, an amount of $179,000 per year. I might mention that total wheeling revenues from Priest Rapids power over all facilities involved will exceed three-quarters of a million dollars per year.

Chairman HAYDEN. That practically pays for it the first year, then.

Mr. PEARL. That is not quite so, but it will pay for it. Our wheeling charges would pay for all wheeling capacity even if there were no other savings. Our wheeling charges, the money we collect for wheeling, will pay for the line, will amortize the line, as well as all other capacity involved in wheeling. That is the basis on which we set up our wheeling charges.

The other thing that I want to be sure to stress is that we need this line even though we don't wheel Priest Rapids power because load growth in the Seattle-Tacoma area is such that our present circuits will become unstable and we will, of necessity, need another line.

Senator MAGNUSON. And further, Dr. Pearl, when we deauthorized Priest Rapids to be built, we set up in the law that this power shall be available to certain communities, and this would be a part of that system.

Mr. PEARL. Yes. I had intended to mention that. As long as you have mentioned it, we have it in the record.

One item that I want to be sure and stress is that this line is not just to wheel Priest Rapids power. To start with, about 25 percent of the line loading will result from carrying Priest Rapids power. But in the matter of a few years, that line will be carrying substantially all Federal power, as the Government's Midway-Hanford load center grows to a point where it can absorb the entire output of the Priest Rapids plant. Stability and service to the Puget Sound area requires this line.

There are other advantages that I think I should mention.

The overall plan of wheeling accomplishes a number of things. (The following chart was submitted:)

Priest Rapids customers requiring wheeling as of March 1957

Utility	Purchased demand	Minimum transmission distance to delivery point	Kilowatt-miles to be transmitted
	Kilowatts	*Miles*	*Thousands*
Cowlitz PUD	12,616	185	2,334
Kittitas PUD	2,523	37	94
Puget Sound Power & Light	50,464	217	10,951
Seattle City Light	50,464	165	8,327
Tacoma City Light	50,464	180	9,084
Washington Water Power Co	38,479	35	1,347
Eugene Water and Electric Board	10,723	370	3,968
City of Forest Grove	3,154	250	788
City of McMinnville	3,154	275	867
City of Milton-Freewater	3,154	95	300
Portland General Electric	87,681	230	20,167
Total	[1] 312,876		58,227

[1] Excludes 230,243 kilowatts reserved by Grant County PUD and 87,681 kilowatts purchased by P. P. & L. Co.

PRIEST RAPIDS ACT

Mr. PEARL. We have a chart that I think will explain in just a minute what would take a lot of words to say.

The Grant County PUD is able, because we have the legal authority to wheel, to sell Priest Rapids power all over the Northwest. That is in keeping with the Priest Rapids Act. You will see here that there will be 11 wheeling customers that range from 35 miles to 370 miles from the dam.

Senator MAGNUSON. You will recall, Mr. Chairman, that in the act, the people wanted to be beneficiaries of some of the Priest Rapids power, and we directed in the act that the power should be available to them.

It is—

To assure that there will be no discrimination between the States in the area served by the project, such license shall provide that the licensee shall offer a reasonable portion of the power capacity and a reasonable portion of the power output of the project for sale within the economic marketing area of the neighboring States and shall cooperate with agencies of such States to insure compliance with this requirement.

Chairman HAYDEN. Who built the Priest Rapids Dam?

Mr. PEARL. Grant County PUD.

Senator DWORSHAK. Was there any Federal participation?

Senator MAGNUSON. No. It is a public utility district set up in our State by State law, similar to school districts, and which has the power to issue bonds.

Senator DWORSHAK. What difference is there in the status between that and some privately owned utility, like Washington Water Power? Would you build transmission lines to take power off the Washington Water Power facilities?

Mr. PEARL. We would not be inclined to do that unless Congress gave us the authority to do it.

Senator DWORSHAK. Do you have authority to do this?

Mr. PEARL. Our regional solicitor says we have, both as a result of the Bonneville Act and as a result of the Priest Rapids Act. They both give us authority to do this.

Senator DWORSHAK. Do you think it would be wise under certain circumstances to have Bonneville Power build lines to that power, say, off of the Clarks Fork, and the other one that Washington Water is building, the Noxon Rapids, would you build a line in there, do you think, to take power off their plant?

Mr. PEARL. If we were requested to do that, we would make a study to see if the benefits accrued would justify it, and then, of course, we feel that we would have to ask Congress for approval.

Senator DWORSHAK. But you do have authorization, you think?

AUTHORITY FOR WHEELING CONTRACTS

Mr. PEARL. We do have authorization here. The history of both of the acts, the Bonneville Act and Priest Rapids Act, both of them indicate that we have authority to enter into contracts to wheel this power.

Senator MAGNUSON. I think the record should show that the Bonneville Act, section 832 (b), dealing with electric transmission lines and equipments, gives the authority. I will quote the pertinent part:

> For the purpose of transmitting electrical energy available for sale from the Bonneville project to existing or potential markets and for the purpose of interchange of electrical energy, to interconnect the Bonneville projects with other Federal projects and publicly owned power systems constructed on or after August 20, 1937—

and Priest Rapids being a publicly constructed project.

Mr. PEARL. I would like now to finish these statements, because I think they are pertinent.

You will notice the block of power that each one of these customers is purchasing varies from a small to a large amount. What this means is that a small distributor in the Northwest, because of wheeling, is able to buy a block of power. It means that a remote customer, one some distance from the project, likewise can purchase some of this power. Without wheeling, neither one of those can be accomplished.

Of course, as I said before, we are legally authorized to wheel, and in so doing, we are carrying out the objectives of the Priest Rapids Act.

CONTRACTS FOR PRIEST RAPIDS POWER

Senator MAGNUSON. You will notice there also that the big blocks of power from Priest Rapids have been contracted for to both publicly owned and private systems.

The Puget Sound Power & Light, a private system, has contracted for a big block, and the Portland General Electric for, I think, the largest block; is that correct?

Mr. PEARL. Yes, sir; that is right.

Senator DWORSHAK. Is this firm power that you would be obligated to take from the public utility plant?

Mr. PEARL. This is all firm power that we will be obligated to take from the plant.

Senator DWORSHAK. If conditions should develop whereby a public utility district wanted to retain its power, could it automatically terminate the sale of power to these groups through your transmission system?

Mr. PEARL. The contracts stipulate the period that they will be required to take this power. I believe it is 50 years.

Senator DWORSHAK. In other words, then, it is a firm agreement to take the power from the public utility district?

Mr. PEARL. That is correct.

Senator MAGNUSON. I forgot that Washington Water Power has also contracted for a big block.

Mr. PEARL. Yes. As you mentioned, Senator Magnuson, some public groups likewise have contracted for large blocks.

Senator MAGNUSON. It is almost 50–50 in there.

Mr. PEARL. Yes. Seattle and Tacoma, for example, are purchasing large blocks.

Senator DWORSHAK. What would the public utility district do with its power if you did not build these lines?

Mr. PEARL. If we did not build these lines? Do you mean if we did not build the Rocky Ford-Tacoma line? We would have to build this line anyhow for Federal power.

Senator DWORSHAK. I did not ask you that. I asked what would the public utility district do with its power? How much power is generated?

Mr. CONKLING. 630,800 kilowatts.

Senator DWORSHAK. What would they do with that if these transmission interchange lines were not constructed?

Mr. PEARL. If you want my personal opinion, I will say they never could have started the dam or gone ahead. They could not have financed it. That is one other factor that I would like to add.

Senator DWORSHAK. Why did not the Federal Government build the Priest Rapids Dam?

Mr. PEARL. That is not a question that I can answer.

Senator MAGNUSON. I can answer that, but it will take about a 2-hour speech.

Mr. PEARL. I have another item that I want to add, and that is that by wheeling we are relieving the pressure on the Federal Government to put up funds to build generation capacity.

Senator DWORSHAK. Dr. Pearl, it just occurred to me that if the Federal Government withdrew from any responsibility or obligation it had to build the Priest Rapids Dam, then obviously it could be compared to the situation affecting the Hells Canyon proposal.

Why could the Federal Government withdraw from the Priest Rapids project without withdrawing from a high Hells Canyon project? If it is obligated in the case of Hells Canyon to build a project, why was it not obligated to build the big Priest Rapids project?

Senator MAGNUSON. In the first place, Priest Rapids was an authorized Government project. Hells Canyon was not authorized. We hope it will be, soon. And one is the Idaho Power Co., a private company, building a dam, and in this case, it was a public utility district.

Senator DWORSHAK. But Priest Rapids is not a Federal project.

Senator MAGNUSON. That is correct. We had to pass an act to deauthorize it so that the public utility district could build it.

Chairman HAYDEN. Did I understand you to say that these facilities would have to be built solely for the transmission of Federal power generation?

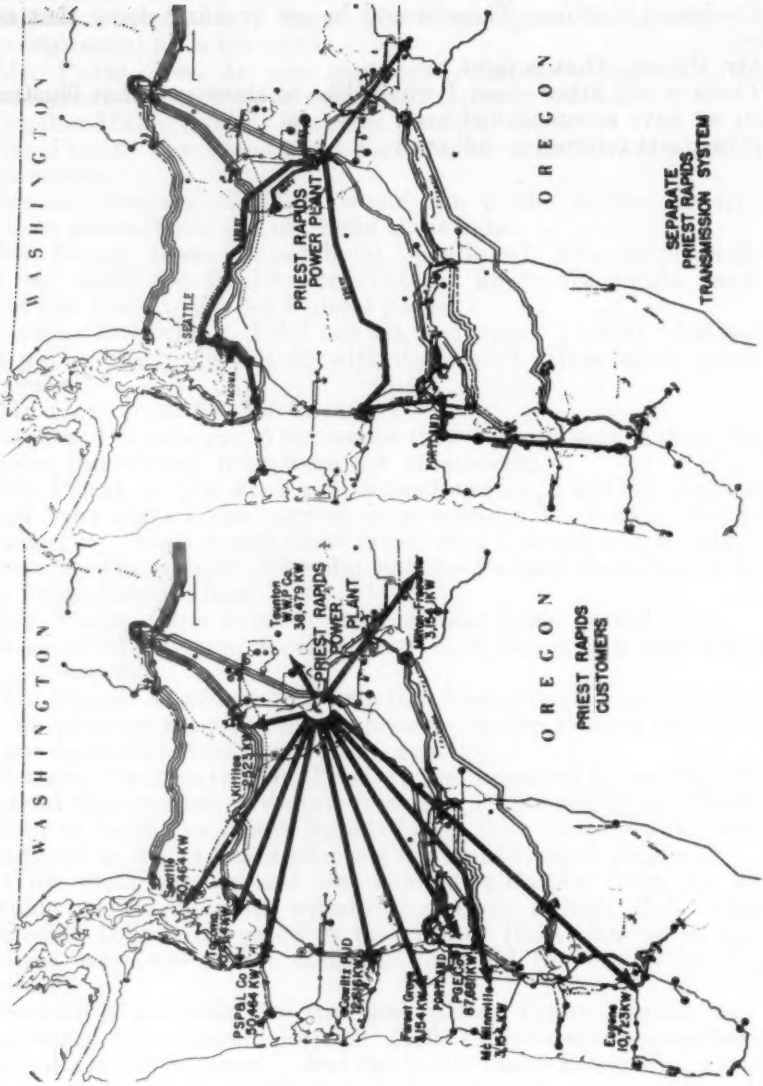
Mr. PEARL. Yes, they will. Without Priest Rapids Dam they could be deferred, perhaps, a year, but they would have to be built.

Chairman HAYDEN. There would be no avoiding doing that anyhow?

Mr. PEARL. That is right.

There is one other chart I would like to show you that illustrates what we have accomplished here.

(The chart referred to follows:)


WASHINGTON
OREGON
SEPARATE
PRIEST RAPIDS
TRANSMISSION SYSTEM
PRIEST RAPIDS
POWER PLANT
SEATTLE
TACOMA
PORTLAND
WASHINGTON
OREGON
PRIEST RAPIDS
CUSTOMERS
PRIEST RAPIDS
POWER
PLANT
Tacoma
30,479 KW
Seattle
20,464 KW
PSP&L Co
20,464 KW
Portland
67,865 KW
Eugene
10,723 KW

Mr. PEARL. Priest Rapids is located in about the center of the BPA marketing area. By wheeling, the Grant County PUD was able to sell power at all the points indicated on the chart, which represent a large part of the entire area served by Bonneville. If it were not for wheeling, and Priest Rapids had gone ahead, they would have been required to build lines as indicated on the chart on the right, and those lines would be parallel to our lines. I think everybody realizes that the economical way to take power a long distance is in large blocks.

Lines such as would be required to go to Eugene could not possibly have been built. Therefore, the only way remote distributors can get power is through this route of wheeling.

Senator MAGNUSON. And, Dr. Pearl, there is ample precedent in the Congress for the Government to enter into these wheeling arrangements?

Mr. PEARL. That is correct.

Senator MAGNUSON. It is more economical, overall, for the whole power picture in a given marketing area.

CHIEF JOSEPH ROCKY-REACH VALLEY LINE

Mr. PEARL. That is correct. The statements that I have just made regarding Priest Rapids apply largely to Rocky Reach also. That is the next item that the House recommended be deleted—the line from Chief Joseph to Valley. We are only asking for a small amount of money, just enough for preliminary surveys.

Senator MAGNUSON. How much is that?

Mr. PEARL. $296,000 is our request.

Chairman HAYDEN. What is the purpose of making the preliminary survey?

Mr. PEARL. First, to determine the best routing for the line. The way we picture it now, the line is indicated in the red line on our map, the farthest north red line. It would tie together the dams, 3 or 4 of the dams, along the river, and then would eventually go across the mountains to Seattle.

The funds we are asking for is to make a study of the location of that line.

Mr. CONKLING. It is also for an actual survey, Dr. Pearl.

Mr. PEARL. Yes.

Chairman HAYDEN. What would you suffer by not getting the money this year?

Mr. PEARL. The timing is such that we feel we should make the surveys this year in order to request funds for construction next year and have the line in in time to meet the schedule for completion of the plant.

Senator MAGNUSON. To coincide with the generation date.

Mr. PEARL. That is right.

Senator MAGNUSON. We have tried to do that in most every case out there and we have been fairly successful in having the lines coincide with the generation dates. We have sometimes been a little behind, but not too much.

Mr. PEARL. It is more economical.

Senator MAGNUSON. Obviously it saves money, because if the generation is there and there is no line, it is lost to us and it is lost to the gross revenues of the people involved.

Mr. PEARL. Likewise, if our construction time is too limited, actual construction costs increase very materially.

CHARGE FOR WHEELING POWER

Senator DWORSHAK. What charge, Doctor, does the Bonneville Power make for wheeling that power?

Mr. PEARL. We have a formula that is based upon our average costs, and it is based upon miles, electrical load, and transformation. We would be glad to submit our——

Senator DWORSHAK. No, I mean approximately, just tell me about what it is.

Mr. PEARL. It will vary according to mileage, kilowatts wheeled, and delivery voltage.

Senator DWORSHAK. The Government would at least get cost out of wheeling the power?

Mr. PEARL. Right.

Senator DWORSHAK. But the Government would not participate in any profits from power generated at Priest Rapids powerplant?

Mr. PEARL. It would not. It would recover its costs.

Senator DWORSHAK. The costs of what?

Mr. PEARL. Transmission.

Senator DWORSHAK. But not of the plant?

Mr. PEARL. Not of the plant.

Senator DWORSHAK. The Government has no interest in the plant?

Mr. PEARL. None whatever.

COST OF PRIEST RAPIDS PLANT

Senator DWORSHAK. What did it cost, the Priest Rapids plant?

Mr. PEARL. Approximately $127 million for the Priest Rapids plant which is the first unit of the total development. The second unit, Wanapum is of about the same size and will cost about as much. Wanapum will be built later.

Mr. Conkling just asked me to mention that they are going to be able to speed up construction of the Priest Rapids plant and have power available a year sooner. That, again, makes our Rocky Ford-Tacoma line a critical item.

Senator DWORSHAK. Did you testify before the House on this item?

Mr. PEARL. Yes, we did. With all due respect, we were cut in time very materially, and did not have adequate time to cover all these points in the House.

Chairman HAYDEN. The House seems to raise the question as to whether there is some legality involved here, and I think we have cleared that up.

LEGAL OPINION

Mr. PEARL. Would you like to have us submit for the record our legal opinion upon which we have proceeded?

Chairman HAYDEN. That would be well.

Mr. PEARL. We have an abbreviated one and then I have a complete one. Would you like to have them both in? A complete legal opinion is quite elaborate.

Senator MAGNUSON. I think we ought to put the complete legal opinion in the file and put the brief one in the record.

Mr. PEARL. All right, sir.

(The information referred to follows:)

STATEMENT OF BONNEVILLE POWER ADMINISTRATOR CONCERNING WHEELING AUTHORITY

1. Authority to wheel Priest Rapids power on a long-term firm basis

The Portland regional solicitor of the Department of the Interior has advised that I have statutory authority to enter into firm contracts under which BPA would commit itself to transmit over the Federal transmission grid the power to be generated at the Priest Rapids development by the Grant County, Wash., Public Utility District. Such contracts can be made for a period of years, and may provide for the transmission of power from the generating plant to the several load centers where the power will be utilized. The regional solicitor has advised me that analysis of the intent of Congress expressed in both the Bonneville Project Act and the Priest Rapids Act, and the legislative history of both of these acts, confers authority upon me as Bonneville Power Administrator to enter into such contracts and to commit the BPA to these activities. Section 2 of the Priest Rapids Act directs that the proposed Priest Rapids development be integrated with the Federal development which has been constructed as a part of the comprehensive plan. The act also requires the licensee of the Priest Rapids project to offer a reasonable portion of the power output of the project for sale within the economic marketing area within the neighboring States. These two requirements could hardly be carried out except through use of the Federal transmission network as a medium for wheeling. Likewise, as Administrator, I have been given authority under the Bonneville Act to construct facilities to interchange power with publicly owned power systems (sec. 2 (b) of the act), and have general contracting authority under section 2 (f) of the act to make contracts to carry out such power interchanges. I have been advised that the contemplated wheeling arrangements for Priest Rapids constitute just such interchanges of power as are within the meaning of the act.

2. Authority to wheel power for public agencies

I have been advised by the regional solicitor of the Department of the Interior that, while each case must rest on its own facts, I am authorized under the Bonneville Act to undertake in most instances the wheeling of power generated at various projects owned by public agencies over the transmission network of the Federal Government. The Bonneville Act expressly authorizes the Administrator to build Federal transmission facilities in order to interconnect Federal projects with publicly owned power systems. The act also expressly states that the purpose of such interconnection is to interchange power and energy. In most of the wheeling arrangements which I anticipate, a true interchange of power and energy may, and probably will, take place. Accordingly, I am advised that, except under most unusual circumstances, section 2 (b) of the act will authorize a contract relating to wheeling power through interchange arrangements between BPA and public agencies. It is not my habit to act upon such general information as this, and in every case where a particular wheeling arrangement is proposed, it is my intent to consult with the solicitor's office.

EXCERPT FROM HOUSE REPORT

Senator DWORSHAK. Apparently the House committee in its report called attention to this being in the nature of legislative authorization which should be considered prior to requests for appropriations.

Of course, Senator Magnuson has read from the act, indicating that there may be some authorization for such lines, but I think at this point we might quote from the House report, as follows:

> The Rocky Ford, Tacoma, and Chief Joseph lines would set a precedent for wheeling non-Federal power long distances to integrate with the Bonneville grid. This is a major policy question and the committee takes the position that proposals such as these should have separate legislative authorization before appropriations are requested.

Mr. PEARL. I would like to add one more comment. I think in the Northwest we have an example that should not be overlooked of

integration and wheeling. That is our Northwest power pool, which means a lot to the Northwest. It, in effect, gives us something around 700,000 or 800,000 kilowatts of power without additional generation.

Senator DWORSHAK. Do you get some of that from private utilities?

Mr. PEARL. We do.

Senator DWORSHAK. Do you build lines to get that power?

WHEELING CONTRACTS WITH PRIVATE UTILITIES

Mr. PEARL. We have wheeling contracts with private utilities, the public groups, and municipalities.

Senator DWORSHAK. You did not answer my question. Do you build transmission lines to take surplus power for the Northwest pool from private utilities?

Mr. PEARL. From private utilities? You said surplus?

Senator DWORSHAK. Well, any power that you get from the Northwest. Are you going to get any power from Washington Power Co. at Clarks Fork?

LINE AT PELTON

Mr. PEARL. The answer to your question is "Yes, we do." We had authorization last year to build a line from the Pelton plant. That is a private project of the Portland General Electric Co. Pelton power will be wheeled by Bonneville, and the benefits that accrue are very material.

Senator DWORSHAK. And it is all privately generated power?

Mr. PEARL. It is all privately generated power.

Senator DWORSHAK. At what plant?

Mr. PEARL. The Pelton plant, on the Deschutes River in Oregon.

Senator DWORSHAK. When was that done?

Mr. PEARL. The plant is under construction now.

Likewise, we are building a line to wheel for Tacoma's Mayfield plant. That is a public agency project.

Senator DWORSHAK. It is not private?

Mr. PEARL. No.

Senator DWORSHAK. Are there any other private plants besides Pelton from which you are taking power over your own lines?

Mr. PEARL. Yes; from the Yale plant of Pacific Power & Light Co. The Yale plant is on the Lewis River. It does not show on the wall map, but it is in southwestern Washington.

Senator DWORSHAK. Yale?

Mr. PEARL. Yale. This map does show the interconnection that we have.

Senator DWORSHAK. How many miles of line did you build there?

Mr. CONKLING. Approximately 10, I believe.

Senator DWORSHAK. How many miles from the Pelton plant did you construct?

Mr. PEARL. It is relatively short.

Mr. CONKLING. It is 25 miles.

Chairman HAYDEN. We had a somewhat similar problem in the Southwestern power area. While all of the various interests that have generation plants have not agreed on how it should be done, they have all agreed that there must be integration of the various generating

plants. I am happy to say that most of our problems in this area have been resolved.

Mr. PEARL. It is the only way you can accomplish maximum development of a resource.

FEDERAL INVESTMENT IN COLUMBIA BASIN POWER

Chairman HAYDEN. As long as this question will be asked, I think it ought to be in the record. How much does the Government have invested in the power facilities in the Columbia Basin system?

Mr. PEARL. Mr. Ostrander has those figures.

Mr. OSTRANDER. I can summarize those figures very briefly for you. As of June 30, 1956, the capital investment allocated to power at the dams, and including the generation capacity at the dams, and including also Bonneville Power Administration's transmission system, amounted to $1,288,760,000 in rounded off figure.

REPAYMENT

Chairman HAYDEN. The next question is how much of this total was due to be repaid on June 30, 1956?

Mr. OSTRANDER. The scheduled amount that should have been repaid by June 30, 1956, was $125,032,739.

Chairman HAYDEN. How much was actually repaid on that date?

Mr. OSTRANDER. We had actually repaid $202,176,121, or $77,143,382 in excess of the scheduled amount.

Senator MAGNUSON. The chart shows that the percent repaid of Bonneville has been 25.14 percent, the Bonneville Dam itself on the breakdown is 41.22 percent repaid.

Senator DWORSHAK. What does that last column indicate?

Mr. OSTRANDER. That is the unpaid balance as of June 30, 1956.

Chairman HAYDEN. I have one other question that arises every year, and I would like to have you discuss it.

In your testimony before the House, Dr. Pearl, you stated it would not be necessary to increase the Bonneville power rates during the year beginning December 1957. You went on to say that there were two reasons, the first being reduced costs and the second being good water. You advised several years ago that the cost of new generation would be so high that it would require an increased rate.

Now you say this is not so. Would you comment on that?

INTERRUPTIBLE POWER SALES

Mr. PEARL. Yes, I will. The situation that I mentioned, good water conditions, means that we have been able to supply more power. Our customers have used more interruptible. During the year 1956, 19.3 percent of our revenue came from interruptible sales.

In making our determination of the adequacy of our rates, we have to think in terms of our revenue and our expenses. The costs of the Chief Joseph and the Dalles projects were materially less than previously expected. That means in general terms that our ex enses are less. On the other hand, our good water conditions and our resulting large sales of interruptible mean that our revenue is higher than we expected.

NO INCREASE IN RATES

We announced recently that it will be not necessary to increase our rates before December 1958.

Chairman HAYDEN. It is evident, though, that there must be some increase sometime, because the charts that you have previously exhibited show that the cost of steel and everything that goes into the new construction is more than it ever was before.

Mr. PEARL. That is evident. Our net some years ago was a material amount, and the net is decreasing each year. The time will come, and it may not be too far off, when it will be necessary to raise our rates. But we feel that we are safe to announce that it will not be necessary before the end of 1958.

RATE OF INTEREST

Senator DWORSHAK. What rate of interest do you have figured on these projects?

Mr. PEARL. Two and a half percent. Mr. Ostrander, would you like to comment on that?

Mr. OSTRANDER. It is 2½ percent except for the Columbia Basin project, which is 3 percent.

Senator DWORSHAK. And all of your transmission lines are amortized with the 2½-percent rate?

Mr. OSTRANDER. That is correct.

Senator MAGNUSON. Would it be safe to say, Dr. Pearl, that the reason we are in this fairly good financial position has been our ability to sell that interruptible power?

Mr. PEARL. Yes. We would have been in the red a number of years ago if we had not been able to sell large amounts of interruptible.

Chairman HAYDEN. I understand that industries in the Pacific Northwest, especially the aluminum industry, provides a ready market for a considerable amount of nonfirm power. This factor also contributes to the lack of necessity for increase in power rates, does it not?

Mr. PEARL. That is correct.

Senator DWORSHAK. Did you have to shut down any of those aluminum plants which were depending to some extent upon interruptible power?

Mr. PEARL. During the last year?

Senator DWORSHAK. Yes.

Mr. PEARL. Yes, we did. However, the plants were not actually shut down. Rather, operations dependent upon interruptible power were curtailed.

Senator DWORSHAK. For how long a period?

Mr. PEARL. About a month.

Senator DWORSHAK. When was that?

Mr. PEARL. February 1957.

Senator DWORSHAK. You did not have a brownout last fall, did you?

Mr. PEARL. No, we did not have a brownout.

Senator DWORSHAK. In past years you had some difficulty in the fall. What was responsible, do you think, for your ability to get through last fall without a brownout?

WATER CONDITIONS

Mr. PEARL. It resulted entirely from the water conditions. If next year we were to have a median year, or let us call it an average year, we could supply all firm load requirements and about half of the interruptible requirements of industrial customers. We would have to curtail some of the interruptible deliveries to industries during the drawdown period.

If next year we have a dry year, it will be necessary to curtail all interruptible supplies to industrial customers and the private utilities will be exposed to a steam cost that could amount to $15 million for the year.

Senator DWORSHAK. Have you had seasons when you did not have to cut down on interruptible power at all?

Mr. PEARL. Yes, we have. If we have what we call a good water year, we can take care of all firm and all interruptible requirements.

Senator DWORSHAK. I guess the Clark's Fork development helped a little bit, did it not, along with Hungry Horse?

Mr. PEARL. Yes. The year after next our generation will increase a little more, in proportion, than the load growth, and we will be in a little better position than we are this coming year.

Senator DWORSHAK. Because of what specific circumstance?

Mr. PEARL. The Dalles coming in. Then next Priest Rapids. There is now in the Northwest almost a 4-million-kilowatt non-Federal generation program under construction, and about a 2-million-kilowatt Federal program.

Senator DWORSHAK. The Northwest pool may get some of that 4 million kilowatts of power?

Mr. PEARL. That is right.

Senator DWORSHAK. That is, if it is in excess of the current requirements of the privately owned utilities which are constructing those facilities.

Mr. PEARL. When you say Northwest generation, if you are including Priest Rapids, you will remember I just showed you a chart, indicating that if we go ahead with wheeling, the power from Priest Rapids will go to both private and public distributors.

OPERATION AND MAINTENANCE

Chairman HAYDEN. If there are no further questions, I will put in the record the budget estimate for operation and maintenance, of $8,630,000, an increase of $1,035,000 over appropriations for the current year.

Of the total increase, $365,000 is required to meet the Government's contribution to the civil-service retirement fund, and the balance of the increase, $670,000, represents an increase in program.

JUSTIFICATION

The House committee recommended the allowance of the entire budget estimate. The justifications I will include in the record.

(The justification referred to follows:)

Analysis of adjusted appropriation

Activity	Total available, 1957 (1)	Increase in base due to Government's contribution to the retirement fund (2)	Adjusted appropriation (3)
1. System operation and maintenance	$6,637,000	$309,000	$6,946,000
2. Power contracts and rates	274,000	16,000	290,000
3. General administration	684,000	40,000	724,000
Total	7,595,000	365,000	7,960,000

Analysis by activities

Activities	Adjusted appropriation	Estimate, 1958
1. System operation and maintenance	$6,946,000	$7,563,000
2. Power contracts and rates	290,000	290,000
3. General administration	724,000	777,000
Total	7,960,000	8,630,000

1. System operation and maintenance

Activities	Adjusted appropriation	Estimate, 1958
(*a*) System operation	$2,620,000	$2,774,700
(*b*) System maintenance	3,569,900	4,016,200
(*c*) Power resources and requirements	210,700	215,900
(*d*) General services and supervision	545,400	556,200
Total	6,946,000	7,563,000

(*a*) *System operation, $2,774,700 (obligations)*

Summary and fund requirements.—$2,774,700 is requested in fiscal year 1958 for the operation of the Administration's transmission system. This is an increase of $154,700 over the operating base. This increase is needed (1) to operate new substations, (2) to schedule and dispatch additional electrical energy, and (3) to provide substation operator apprentices to meet future operator requirements and to offset operator losses resulting from personnel attrition.

Activities covered.—Operations activities include the determination of BPA and power pool operating plans, power scheduling and dispatching, operation of substations, and custodial and groundskeeping tasks at substations.

Funds are used for personnel, travel between substations, and expenses in connection with operating agreements and leases of facilities. One hundred forty-four BPA substations are operated entirely or in part by customers under operating agreements, the bulk of which involve little or no cost to the Administration. To avoid duplication of facilities, or where it is more economical, the Administration leases from other utilities power facilities, principally transmission lines, for delivery or receipt of power.

Justification.—Workload index with respect to power scheduling, dispatching and integration activities in fiscal year 1958, compared with prior years, are as follows:

	Beginning of year		
	Fiscal year 1956	Fiscal year 1957	Fiscal year 1958
Federal plants connected to system:			
Number	9	11	11
Peaking capacity (kilowatts)	4,184,600	4,829,300	5,431,900
Points of delivery	330	331	346
Energy sales (millions of kilowatt-hours)	25,974	28,800	31,600
Leased facilities (annual charges)	$155,893	$167,224	$173,292
Transformer capacity (kilovolt-amperes)	7,337,000	8,009,000	10,795,000
Transmission lines (structure miles)	6,320	6,730	6,873

Substations to be operated in fiscal year 1958, compared with prior years, are as follows:

Class [1]	Substations in service at beginning of year			Change, fiscal year 1957 to fiscal year 1958
	Fiscal year 1956	Fiscal year 1957	Fiscal year 1958	
1	2	4	4	0
2	10	10	10	0
3	19	18	18	0
4	14	17	19	+2
5	9	9	7	−2
6	14	13	16	+3
7	106	107	111	+4
Total	174	178	185	+7

[1] Substations are classified according to importance, type, and number of installed facilities, transformer capacity, voltage, relation to the system, and other factors. This classification is used as a guide so the level of manning for individual substations.

(*b*) *System maintenance, $4,016,200 (obligations)*

Summary and fund requirements.—$4,016,200 is required in fiscal year 1958 for the maintenance of the Administration's transmission system, which is an increase of $446,300 over the operating base as shown in the following table:

	Base, 1958	Estimate, fiscal year 1958	Increase
Supervision	$107,100	$111,400	$4,300
Transmission lines	989,500	1,108,200	118,700
Substations	981,500	1,111,000	129,500
Meter and relays	550,200	621,000	70,800
Communications	711,100	768,300	57,200
Buildings, grounds, and other maintenance services	230,500	296,300	65,800
Total	3,569,900	4,016,200	446,300

The administration's maintenance program falls into three categories: (1) preventive maintenance undertaken in accordance with established schedules or frequencies; (2) emergency maintenance, such as the repair of damage due to storms, equipment failures, etc.; and (3) special maintenance where unusual conditions occur and require special attention.

The administration has adopted a regularly scheduled plan of preventive maintenance for the purpose of covering the entire electrical system over a designated period. The preventive maintenance program is formulated in terms of specific items of equipment to be serviced in each successive year. Emergency maintenance on the other hand, must be planned for on the basis of past experience without specific identification as to location or types of equipment. Based on an average of prior years experience, sufficiently accurate data is obtained to establish these requirements in total. However this data cannot indicate the precise location of emergency situations. For example, while experience shows

that a number of insulators are damaged yearly by lightning or rifle fire, requiring emergency restoration of service, it is not possible to determine the exact location and number of future incidents. Special maintenance in the past has included the investigation of the causes of the failures or faulty operation of breakers, bushings, capacitors and their switches and other equipment and the establishment of remedial measures. Of particular significance in this category is the fact that the problems are nonrecurring and in some instances cannot be anticipated specifically. However, where it is possible to spell out the problem the administration has done so. For example, a bushing study was initiated under this category in fiscal year 1956 and it is determined that 23 bushings should be replaced in 1958. This study is being continued in 1958. Another case is the procedural development and operation of the new diatomaceous earth filters to refine transformer oil. After a 2-year initial experimental and developmental period to end with fiscal year 1958, such work will be included in the basic substation maintenance program.

Also included in the administration's maintenance program are general maintenance services, which cover the maintenance of buildings and grounds and technical and engineering services. Buildings and grounds maintenance includes exterior and interior painting, roofing, plumbing, and mechanical maintenance of untanking towers, cranes, pumps, fire systems, spur tracks, roads, and fences, together with custodial and groundskeeping activities at J. D. Ross substation. Technical services cover the work of the technical laboratory to meet the operation and maintenance needs of the system, examples of which are the power factor testing of transformer and circuit breaker 115- and 230-kilovolt bushings, determination by tests of insulation levels of condenser windings and resistivity of substation grounding mats. Certain engineering services also are included, such as the preparation of facility diagrams for operation and maintenance purposes, which must be revised from time to time to reflect additions and changes, the preparation of survey records and maps to keep system information up to date, and the design of alterations or additions which are not properly construction items.

All maintenance is undertaken to minimize costs and to meet the Administration's obligation as on operating utility to furnish continuous service to its customers. Maintenance plans for fiscal year 1958 are intended to prevent costly repairs, interruptions of service and loss of revenue. The combination of these three factors has been evaluated to achieve a balanced maintenance program, to eliminate overmaintaining the system which would result in increased costs, and yet to avoid undermaintaining the system which also results in increased costs. The Administration has combined its 18 years of experience as an operating utility with the experience of other utilities and the recommendations of equipment manufacturers in determining its maintenance programs. The frequencies of maintenance which have been established are very definitely at less intervals than those recommended by most manufacturers of equipment or those followed by other utilities whose published data reveal frequencies of maintenance.

Definite steps have been taken where possible to offset deterioration in facilities brought about by the increasing age of the system. In fiscal years 1956 and 1957 pole top treatment was undertaken and is to continue in an attempt to prolong the useful life of poles. Examination has indicated that the butts of poles are in satisfactory condition due to the application of preservatives and the chief concern is with the tops of the poles. The examination and experience of others has further revealed that the life of the pole is considerably lengthened if treated at the proper time.

Corrosion studies of steel tower footings is continuing on the basis of the data obtained on the Bonneville-Oregon City lines. The value of cathodic protection to arrest corrosion on steel tower footings will be determined by these studies and again is indicative of some of the problems posed by older portions of the system.

(*c*) *Power resources and requirements, $215,900 (obligations)*

Summary and fund requirements.—$215,900, an increase of $5,200, is required in fiscal year 1958 for power capability and load studies. There is a staff increase of one engineering position. This position is needed for an increasing amount of detail studies required for efficient scheduling, developing operating plans and other related problems such as upstream storage, downstream benefits, coordination with steam plants and partnership proposals, and the determination of usable resources at various load levels.

Activities covered.—Power resources and requirements activities include power capability studies, generation planning, hydrometeorologic and streamflow forecasting, new power-projects analyses and load estimating. Funds are used

principally for salaries of personnel engaged in these activities and for the Administration's share of the costs of operation of the interagency hydrometeorologic network which provides the basic data for streamflow forecasts.

Justification.—Power resources and requirements workloads increase as new Federal plants are incorporated into the Federal generating system, as additional non-Federal plants are under consideration for integration with the Federal system, and as points of delivery, requiring additional load estimates, are added.

The increase in Federal generating capacity over the next few years has been discussed previously in this document. New non-Federal generating projects scheduled and under active consideration now total 53. New projects under consideration are under constant revision, which require comments on applications for Federal Power Commission permits and licenses and necessitate basic resource data for interutility studies. Personnel engaged in power-resource activities participate in the work of five interutility committees. While no increase in the number of committees is anticipated in fiscal year 1958, workloads for existing committees will continue to impose a heavy demand on the staff.

Staffing changes.—It is proposed to employ one additional engineer to keep pace with scheduled additions at Federal and non-Federal plants, additional interconnections, and other projects under active consideration.

(d) General services and supervision, $556,200 (obligations)

Summary and fund requirements.—$556,200 is required in fiscal year 1958. This is a program increase of $10,800 over the operating base. This increase is needed for an increasing administrative workload and added engineering activities in the area (field) organization.

Activities covered.—General services and supervision include (1) general direction and supervision of all system operation and maintenance activities, (2) system engineering and technical analyses including both central and field engineering, and (3) such general services as safety operations and employees' group life insurance, all of which are related to the operation and maintenance of the administration's transmission system.

Justification and staffing changes.—The employment of an engineer will be required because of increased engineering activities in the Portland area office. This increase centers around and is required because of the rapid development in the economy of the Portland area.

One new clerk-stenographer is required in system engineering. The increasing workload for the past few years has been carried by temporary employment. To effectively perform the clerical and stenographic work, a permanent position is necessary.

One new field clerk is required in the Seattle area to assist field crews which do not have an assigned clerk and to fill in during absence of assigned field clerks.

2. Power contracts and rates

Summary and fund requirements.—$290,000 is required in fiscal year 1958 for work related to power contracts and rates. No increase is requested.

Activities covered.—Power contract and rate activities are negotiation of contracts, planning of electrical facilities to serve customers, drafting of power sales contracts and exchange agreements, computation of wholesale power bills, preparation of official reports on generation and sales required by the Federal Power Commission and others, and studies of the Administration's wholesale power rates.

Justification.—Power contract and service planning activities to be undertaken in fiscal year 1958, compared with prior years, are shown as follows, together with billing and sales data:

	Actual, fiscal year 1956	Estimated		Increase, fiscal year 1957 to fiscal year 1958
		Fiscal year 1957	Fiscal year 1958	
Service plans	40	40	40	
Power contracts (new actions)	95	95	95	
Power bills (number)	1,480	1,500	1,550	50
Revenues (BPA only)	$80,833,997	$67,500,000	$74,400,000	$6,900,000
Energy sales (millions of kilowatt-hours)	25,974	28,800	31,600	2,800

3. General administration

Activities	Adjusted appropriation	Estimate, 1958
(*a*) Administration	$157,500	$159,700
(*b*) Personnel	76,900	86,000
(*c*) Administrative services	180,000	195,500
(*d*) Fiscal services	206,700	221,500
(*e*) Budget and management	45,200	47,500
(*f*) General services	57,700	66,800
Total	724,000	777,000

The increases are needed primarily for the allocation of a higher proportion of the activities to operation and maintenance functions, with a corresponding decrease in charges to construction. The fiscal year 1958 request also provides for minor increases in general costs. No increases in staff are planned.

Activities covered.—Activities consist of general management, fiscal, administrative, and general services. These activities will take only 9 percent of the operation and maintenance dollar in fiscal year 1958, a reduction from the 9.1 percent of the preceding year.

Justification.—The increased funds required do not represent added staff. No increases in staff are planned. The bulk of the increase is due to changes in the accounting allocation between operation and maintenance and construction of the total costs of general administrative work. This allocation is directly related to the balance between the operation and maintenance and construction programs of the Administration. As the system grows it is necessary that a higher proportion of general staff time be devoted to the operation and maintenance program and a lesser proportion to the construction program. $45,600 of the $53,000 increase is due to this change in allocation. There is an offsetting decrease in administrative costs chargeable to the construction appropriation.

The remaining increase of $7,400 is due to savings which were effected in fiscal year 1957 but are improbable in fiscal year 1958. These 1957 savings consisted primarily of the following:

1. Electronic computer rental costs shared by Corps of Engineers for "308" review report studies.

2. Reimbursed staff loans by BPA to other Federal agencies in excess of ordinary practice.

Appropriations

1948	$2,640,000	1953	$6,600,000
1949	3,521,600	1954	6,004,000
1950	4,180,000	1955	6,200,000
1951	5,000,000	1956	6,775,000
1952	5,368,439	1957	[1] 7,595,000
3d supplemental, pay	224,000		

[1] Includes $195,000 appropriated in Second Supplemental Appropriation Act, 1957.

Itemization of estimates

	Estimate, 1957	Estimate, 1958
Program financing: Appropriation	$7,595,000	$8,630,000
Obligations by objects:		
01 Personal services	5,661,900	6,085,500
02 Travel	194,800	202,500
03 Transportation of things	32,200	31,500
04 Communication services	189,000	210,000
05 Rents and utility services	87,700	91,900
06 Printing and reproduction	3,000	3,000
07 Other contractual services	264,400	291,600
Services performed by other accounts	707,400	830,500
08 Supplies and materials	429,800	499,500
11 Grants, subsidies and contributions	4,600	4,700
Contribution to retirement fund		365,000
13 Refunds, awards, and indemnities	20,200	14,300
Total obligations	7,595,000	8,630,000

COMPARISON WITH OTHER UTILITIES

Chairman HAYDEN. How do your standards and practices of operation and maintenance compare with those of utilities operating in the Pacific Northwest?

Mr. PEARL. We have made a study and can supply it for the record, if you would like to have it. We have a good operation, not an elaborate one but a good operation.

Chairman HAYDEN. I think it might be well to put it into the record.

Senator MAGNUSON. Yes.

By comparison, you have a good operation?

Mr. PEARL. Yes. The study will show the comparison. Our practices are quite conservative.

(The information referred to follows:)

Comparison—BPA maintenance schedules with other utility and industry practices—Substation maintenance

	BPA schedule	Utilities [1]	Bureau Electrical Authority [2]	General Electric [3]	Westinghouse [4]	Industry [5]	Other [6]
Circuit breakers: [7]							
230 kilovolts and over	2 years	1 to 5 years	1 to 2 years		2 years	1 year	1 to 6 years.
115 kilovolts except capacitor	3 years	do	do		do	do	Do.
115-kilovolt capacitor	1 year						
69 kilovolts and under	3 years	1 to 5 years	1 to 2 years		2 years	1 year	Do.
69 kilovolts and under, capacitor	1 year						
Mechanism service	8 months	6 to 12 months			6 months		6 to 12 years.
Insulation test	(8)	3 years					2 years.
Transformers:							
Complete service	As required			15 years			6 to 20 years.
Undercover service	10 years			10 years			1 to 5 years.
Accessory service	8 months	6 months		3 months	6 months		1 to 12 years.
Station service and instrument transmission.	4 years						
Insulation test	(8)						
Synchronous condensers:							
Complete service	As required	2 to 3 years		2 years	2 to 5 years	2 to 3 years	1 to 5 years.
Partial service	1 year	1 year					
Exciter service	3 to 4 months	3 to 6 months		1 to 2 months			1 to 3 years.
Disconnect switches:							
Group operated	2.5 to 5 years	1 year		1 year			
Hook operated	6 years	do		do			
Power operated	2 years	do					
Mechanism service	6 months						

[1] Based on published data as follows: Circuit breakers—Commonwealth Edison Electric Light & Power, February 1955; all equipment—New England Electric System Electrical World, Aug. 9, 1954; synchronous condensers—Virginia Electric & Power Co. E. L. & P., April 1954.

[2] From a CIGRE paper 203, 1952.

[3] From various General Electric instruction books, publications, etc.

[4] From similar Westinghouse publications.

[5] American Institute of Electrical Engineers, National Electrical Manufacturers Association.

[6] Unpublished data from other utilities (sources confidential, for staff use only).

[7] Nearly all utilities specify a maximum time interval for maintenance of circuit breakers which is reduced in accordance with such other factors as the number of fault interruptions, switching operations, and experience with the particular breaker.

[8] BPA's bushing and insulation test work is now being expanded to eventually correspond with the practices of the industry.

AIEE Survey Relay Maintenance

Relay check	Time interval	250 megawatts 6 companies	250 to 1,000 megawatts 42 companies	1,000 megawatts and over 22 companies including Bonneville Power Administration
Tripping by manual operation of relays	1 month	1	3	2
	3 months		3	
	6 months	1	5	1
	1 year	3	17	[2] 12
	1½ years		1	
	3 years	1	1	
Check current circuits normally not carrying appreciable current.[1]	6 months		2	1
	1 year	1	9	[2] 7
	1½ years		1	
	2 years		3	1
	3 years	1	1	1
	4 years	1	1	
	5 years		1	2
Maintenance and tests of carrier equipment and phase comparison relays.	1 day		1	
	1 week		1	
	1 month	1	2	
	5 weeks		1	
	3 months	1	5	4
	6 months		7	[2] 5
	8 months		1	
	9 months			1
	1 year	2	7	4
	1½ years		1	
	2 years		2	
Maintenance and tests of pilot and remote trip schemes other than carrier.	1 day		1	
	1 week		2	
	1 month		3	1
	6 months	1	6	3
	8 months		1	
	9 months			1
	1 year		11	[2] 9
	1½ years		1	
	2 years	1	6	
	3 years	1		

[1] Such as ground, neutral or differential circuits.
[2] Bonneville Power Administration.

The time interval between scheduled tests according to prevailing practice is indicated in the following tables:

TABLE I.—*Maintenance and calibration*

Relay types	Time interval	250 megawatts (6 companies)	250 to 1,000 megawatts (42 companies)	1,000 megawatts and over (22 companies including BPA)
Time overcurrent relays: Distribution circuits.	6 months		2	
	8 months		1	
	1 year	1	18	11.
	1½ years		1	1.
	2 years	1	6	5, BPA.
	3 years	2	5	1.
	4 years		2	
	5 years			1.
Time overcurrent relays: Transmission, generators, and bus differential.	6 months		5	2.
	8 months		1	
	9 months			2.
	1 year	2	16	13, BPA.
	1½ years		1	
	2 years	1	7	1, BPA, for overcurrent type.
	3 years	1		
	4 years		1	
Distance-type relays	6 months		6	3, BPA, type II.
	8 months		1	
	9 months			1.
	1 year	2	17	9, BPA, type I.
	1½ years		1	
	2 years	2	7	
	3 years	1	1	
Bus and equipment differential relays.	6 months		6	1.
	8 months		1	
	9 months			1.
	1 year	1	16	11, BPA.
	1½ years		1	
	2 years	1	8	1.
	3 years	2		
	4 years		1	

Frequency of meter tests

Type of meters	Utility		
	BPA	PGE	City of Los Angeles
Demand type I	1 per 12 months	1 per 3 months	1 per 6 months.
Demand type II	1 per 24 months	do	Do.
Printing demand	1 per 2 months	do	
Micromax	do		
River gauge	do		
Telemeter L and N	1 per 24 months		
Telemeter B or W	do		

Frequency of meter inspections

Type of meters	Utility			
	BPA	PGE	P. S. P. & L. Co.	Seattle
Demand type I	1 per 2 months	Weekly	1 per 2 weeks	Weekly.
Demand type II	do	do	do	Do.
Printing demand	1 per month			
River gage	do			
Telemeter L and N	do	1 per month		
Telemeter B or W	1 per 4 months	do		

Communications maintenance—Comparison of frequency of scheduled inspections

Equipment type	Manufacturer's recommendation	Practice	BPA frequency
Fixed radio	M	M	2M.
Mobile radio:			
MF	M	M	3M.
VHF	M	M	3M.
Carrier telephone	M	M	3M.
Carrier relay	M	M-3M	3M.
Carrier supervisory and telemeter	M	M	None.
Submultiplex	M	M	3M.
Supervisory control	M	M	None.
Telephone switchboard	M	2M	3M.
Fault locator			2M.
Philco microwave	W	W-M	2M.
FTR microwave	W	W-M	2M.
Motorola microwave	W	W-M	2M.
Emergency power supply	M	M	2M.

EXPLANATION OF SYMBOLS

W—Weekly. 2W—Every 2 weeks. M—Monthly. 3M—Every 3 months. None—No preventive maintenance.

NOTE.—The utility practice figures are based on discussions with representatives of utilities in the Northwest and pipeline utilities in the Middle West.

INCREASING COSTS

Chairman HAYDEN. Earlier, we discussed the general trend of increasing costs in the construction program. Does this same trend apply to operation and maintenance?

Mr. PEARL. Yes, it does. Further, since we presented our budget to the House, as a result of labor negotiations we will have to absorb an additional $175,000 in 1958. These increased costs result from wage increases for our "hourly" or craft-type employees, which are determined at our regular labor negotiations that we carry on each year. Similar negotiations are carried on by all of the other major utilities, Bonneville being the last to negotiate each year. We find it necessary, of course, to keep our labor salaries in line with those of the other utilities.

Chairman HAYDEN. That is all we have on Bonneville, unless you gentlemen have some questions.

Senator DWORSHAK. I have just one question.

I was wondering, Dr. Pearl, whether you inserted in the record the total cost of the Rocky Ford-Tacoma line and the Chief Joseph-Valley line.

Mr. PEARL. I did not in my presentation. We can give you that for the record, if you would like to have it.

Senator DWORSHAK. You are not asking for the full amount now, are you?

ROCKY FORD-TACOMA LINE REQUEST

Mr. PEARL. No, we are not. In the 1958 budget we are asking for $1,863,000 for the Rocky Ford-Tacoma. The total cost will be $8,594,000.

Senator MAGNUSON. That will be spread, as I understand it, over about a 3½- to 4-year period?

Mr. PEARL. That is correct.

Senator DWORSHAK. I thought you wanted it completed in a year or so.

Mr. PEARL. Not over a year or so. I meant to say that Grant County PUD feels it may be able to speed up construction of the Priest Rapids plant 1 year.

Senator DWORSHAK. When will the power be available?

Mr. PEARL. 1960, or earlier we think now.

Senator DWORSHAK. Your present schedule for the construction of the Rocky Ford-Tacoma line will have the lines available when the power is available at Priest Rapids?

Mr. PEARL. It probably will not be possible to speed up the construction of the line a full year, but loads can be carried if the line is in service by the fall of 1960, provided some relatively minor accelerations of interconnecting facilities are made.

Senator DWORSHAK. What is the other one that you are asking for?

CHIEF JOSEPH VALLEY REQUEST

Mr. PEARL. The other one is the Chief Joseph-Valley line. We are asking for $296,000 for fiscal 1958, and the total cost of that line is $14,910,000.

Senator MAGNUSON. That is planning money?

Mr. CONKLING. And some surveys.

Senator MAGNUSON. Planning and surveys?

Mr. PEARL. Yes.

Senator DWORSHAK. When will that line be completed, according to your present schedule?

Mr. PEARL. The fall of 1961.

Senator DWORSHAK. That would primarily accommodate which generating plant?

Mr. PEARL. It accommodates both Federal and non-Federal plants. The Federal plants are Grand Coulee and Chief Joseph, and the non-Federal plant is Rocky Reach. The line will be routed by the site of the proposed Wells project, now under consideration for non-Federal development.

Senator DWORSHAK. Would you trace that line?

Mr. PEARL. It is the red one that I am tracing on the chart, the northernmost one shown on this map.

Senator DWORSHAK. Thank you.

Chairman HAYDEN. We thank you, gentlemen, for your appearance today.

We will put into the record the chart on the return of power capital investment.

(The chart referred to follows:)

Columbia River Power System—Return of power capital investment (operating projects only) June 30, 1956

Projects	Power capital [1] investment	Repaid as of June 30, 1956	Percent repaid	Net power [1] investment
Bonneville Power Administration	$412,098,423	$103,597,391	25.14	308,501,032
Bonneville Dam	59,839,067	24,662,894	41.22	35,176,173
Columbia Basin	207,000,732	51,972,069	25.11	155,028,663
Hungry Horse	87,502,575	4,783,408	5.47	82,719,167
Albeni Falls	30,549,396	641,061	2.10	29,908,335
McNary	272,972,262	12,843,739	4.71	260,128,523
Detroit-Big Cliff	41,905,270	2,044,687	4.88	39,860,583
Lookout Point-Dexter	41,542,590	1,053,352	2.54	40,489,238
Chief Joseph	131,848,105	455,850	.35	131,392,255
Chandler	3,494,519	121,670	3.48	3,372,849
Total	1,288,752,939	202,176,121	15.68	1,086,576,818

[1] Exclusive of unexpended funds in U. S. Treasury.

Southeastern Power Administration

OPERATION AND MAINTENANCE

STATEMENT OF CHARLES W. LEAVY, ADMINISTRATOR, SOUTHEASTERN POWER ADMINISTRATION

JUSTIFICATION

Chairman Hayden. The budget estimate for "Operation and maintenance" is $1.939,000. For the current year $1,878,000 was appropriated, and, in addition, a transfer of $35,000 is pending in the third supplemental appropriation act. Therefore, the adjusted appropriation for the current year is $1,913,000.

The House committee recommended that the budget estimate be allowed.

The justifications will be included in the record.

(The justifications requested follow:)

Analysis of adjusted appropriation

Activity	Total available 1957 (1)	Increase in base due to Government's contribution to the retirement fund (2)	Adjusted appropriation (3)
1. System operation and maintenance	$75,000	$4,000	$79,000
2. Purchase of energy and wheeling charges	1,634,000		1,634,000
3. Power contracts and rates	89,500	5,000	94,500
4. General administration	79,500	5,000	84,500
Total	1,878,000	14,000	1,892,000

Analysis by activities

	Adjusted appropriation	Estimate, 1958
1. System operation and maintenance	$79,000	$79,000
2. Purchase of energy and wheeling charges	1,634,000	1,681,000
3. Power contracts and rates	94,500	94,500
4. General administration	84,500	84,500
Total	1,892,000	1,939,000

GENERAL STATEMENT

Statutory authority and agency responsibilities

Section 5 of the Flood Control Act of 1944 makes the Secretary of the Interior responsible for marketing the power and energy generated at all reservoir projects under control of the Corps of Engineers, Department of the Army. In March of 1950 the Secretary established the Southeastern Power Administration to carry out this responsibility in a 10-State area consisting of West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, and Kentucky.

Broad objectives

The agency's overall, continuing objectives are defined by section 5. Under its terms the agency is required to "transmit and dispose" of power and energy "in such manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles." It provides for the agency's rate schedules "to become effective upon confirmation and approval by the Federal Power Commission" and further provides that "rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the project) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years." It requires the agency to give "preference in the sale of such power and energy" to public bodies and cooperatives. Accordingly, the agency's budget year objectives may be defined in broad terms to consist of those accomplishments appropriate to the circumstances of the budget year that carry out the provisions of section 5.

December 1956 status of generating capacity and marketing arrangements

	Kilowatts operating at December of current year	Kilowatts under construction for operation in—					
		Current year	Budget year	Fiscal year 1959	Fiscal year 1962	Fiscal year 1963	Total
1. Wolf Creek	270,000						270,000
2. Center Hill	135,000						135,000
3. Dale Hollow	54,600						54,600
4. Allatoona	74,000						74,000
5. Philpott	14,000						14,000
6. John H. Kerr	204,000						204,000
7. Clark Hill	280,000						280,000
8. Jim Woodruff		30,000					30,000
9. Buford		46,000	40,000				86,000
10. Old Hickory		25,000	75,000				100,000
11. Cheatham			12,000	24,000			36,000
12. Fort Gaines					32,500	97,500	130,000
Total	1,031,600	101,000	127,000	24,000	32,500	97,500	1,413,600

The output of the projects is being sold under 119 long-term contracts and 3 short-term, interim agreements. The entire output of the first three projects shown on the table (Wolf Creek, Center Hill, and Dale Hollow) is being sold to the Tennessee Valley Authority under a long-term contract. The Georgia Power Co. is purchasing the entire output of the Allatoona project under a long-term contract. The Appalachian Electric Power Co. is purchasing the output of the Phil-

pott project under a short-term, interim agreement and the Florida Power Corp. is purchasing the output of the Jim Woodruff project under a short-term, interim agreement. Two-thirds of the output of the John H. Kerr project is being sold under long-term contracts to the Virginia Electric & Power Co. and to 17 rural electric cooperatives of Virginia and North Carolina. The remaining one-third is being sold under long-term contracts to the Carolina Power & Light Co. and to 16 preferred agencies in North Carolina. Clark Hill project power allocated to South Carolina is being sold to the South Carolina Public Service Authority and the Greenwood County Electric Power Commission under long-term contracts and to the South Carolina Electric & Gas Co. under a short-term "when, as, and if" contract. Clark Hill power allocated to Georgia is being sold under long-term contracts to the Georgia Power Co. and to 37 rural electric cooperatives and 42 municipalities in Georgia.

It is anticipated that during the current year or early in the budget year long-term arrangements will also be concluded for the sale of the output of the Philpott, Jim Woodruff, Buford, Cheatham, and Old Hickory projects.

Budget year objectives

The budget year objectives may be summarized as follows:

(1) Administration of over 200 long-term contracts which are expected to be in effect at the beginning of the budget year;

(2) Establishment of rates for the Fort Gaines and Hartwell projects;

(3) Maintenance of individual and consolidated repayment accounts for 11 projects involving a power investment of approximately $400 million;

(4) Determination of the technical and financial benefits available from integrated operation of the Fort Gaines and the Hartwell projects with the Clark Hill, Buford, Allatoona, and Jim Woodruff projects.

Funds required for appropriation

The agency's appropriation request consists entirely of operation and maintenance funds in the amount of $1,939,000. The funds are distributed among four activities, namely, system operation and maintenance, power contracts and rates, general administration, and purchase of energy and wheeling charges. Purchase of energy and wheeling charges is estimated to require $1,680,000. The remaining $258,000 is required for actual operation of the agency and provides for a continuation of the agency's working force at the current year level.

Status of revenues

Last year's actual revenues and the revenues which are estimated for the current year and the budget year are as follows:

Projects	Fiscal year 1956 (actual)	Fiscal year 1957 (estimated)	Fiscal year 1958 (estimated)
Wolf Creek, Center Hill, Dale Hollow	$5,070,000.00	$3,950,000.00	$3,950,000
Old Hickory		69,600.00	1,044,000
Cheatham			69,000
Allatoona	847,214.50	979,181.00	1,048,000
Buford		138,600.00	1,524,600
Jim Woodruff		391,000.00	1,578,800
Clark Hill	1,868,930.02	3,906,795.23	4,388,200
Philpott	295,860.30	131,095.65	217,100
John H. Kerr	3,452,553.51	4,242,855.67	4,542,500
Total	11,444,558.33	13,809,127.55	18,162,200

JUSTIFICATION

System operation and maintenance, $79,000.—The estimate for this activity for fiscal year 1958 is $79,000, an increase of $4,000 over the current year.

The activity is carried out to provide schedules for the generation of power, supervision of power deliveries as required by contractual arrangements, and determination of methods of coordinating operation of present and proposed generating plants to obtain maximum utilization of resources.

Constituent tasks of the activity enumerated below are accomplished continuously in every year. Their scope will increase in the budget year as a consequence of operational and power disposal arrangements secured in the curent year.

Purchase of energy and wheeling charges, $1,681,000.—The estimate for this activity for fiscal year 1958 is $1,681,000, an increase of $47,000 over the current year.

Funds appropriated for the activity are used only to pay amounts charged the Government under contractual arrangements for (1) delivery of power over non-Federal systems to load centers of power purchasers for the account of the Government and (2) purchase by the Government of energy to firm up federally generated power to the load factor required by power purchasers. The fiscal year 1958 appropriation requested for the activity provides solely for such payments under the existing contracts with the Virginia Electric & Power Co., Carolina Power & Light Co., and Georgia Power Co.

Nine hundred and ninety-one thousand dollars of the requested amount is for the purchase of energy and payment of wheeling charges under the contract with Virginia Electric & Power Co. It will accomplish service to 17 rural electric cooperatives at approximately 80 points of wholesale delivery located within the service area of the John H. Kerr project. The requested amount is not based on critical water year conditions at the project, but instead on an average condition. In arriving at the amount of the estimate for fiscal year 1958, a determination was made of the actual payments that would have occurred under the VEPCO contract had the contract been in operation and serving the estimated 1958 requirements of the 17 cooperatives during 22 years for which actual water records are available. The requested amount is the average of these yearly determinations. The 17 cooperatives are estimated to require 142,300,000 kilowatt-hours of firming energy including transmission losses in fiscal year 1958, divided into 50,300,000 kilowatt-hours of on-peak energy and 92 million kilowatt-hours of off-peak energy. It is estimated that 136,500,000 kilowatt-hours of energy will be wheeled within zone 1 and 136 million kilowatt-hours within zone 2. The application of these requirements to 22 years of record at the project to arrive at the request for fiscal year 1958 is shown on the following page.

One hundred and ninety thousand dollars of the requested amount is for the payment of wheeling charges under the contract with Carolina Power & Light Co. It will accomplish service to 15 rural electric cooperatives and 1 municipality at approximately 65 points of wholesale delivery located within the service area of the John H. Kerr project. The requested amount is not based on critical water year conditions at the project, but instead on an average water condition. It is estimated that 39,700,000 kilowatt-hours of energy will be wheeled within zone 1 and 83,500,000 kilowatt-hours within zone 2.

Five hundred thousand dollars of the requested amount is for the payment of wheeling charges under the contract with Georgia Power Co. It will accomplish service to 37 rural electric cooperatives and 41 municipalities at approximately 225 points of wholesale delivery located within the service area of the Clark Hill project. The requested amount is not based on critical water year conditions, but instead on an average water condition. It is estimated that 59,800,000 kilowatt-hours of energy will be wheeled within zone 1, 100,400,000 kilowatt-hours within zone 2 and 105,800,000 kilowatt-hours within zone 3.

Power contracts and rates, $94,500.—The estimate for this activity for fiscal year 1958 is $94,500, an increase of $5,000 over the current year.

The activity is conducted to prepare for, accomplish, maintain and review the results of power disposal arrangements. In its conduct the agency determines the production cost and the selling price of the power; identifies purchasers and delivery measures; negotiates and administers appropriate contracts; and conducts continuous review of results.

The tasks making up the activity are continuing in nature. Their number is subject to some variation from year to year according to circumstances, as is the placement of emphasis among them. Both their number and the amount of work entailed in their accomplishment will increase in the budget year.

General administration, $84,500.—The estimate for this activity for fiscal year 1958 is $84,500, an increase of $5,000 over the current year.

The activity is conducted to provide executive management for the agency and to supply the agency with supporting administrative services. Its extent from year-to-year results from and is proportionate to the extent of the agency's other activities.

Appropriations

1950	$70,000	1954	$1,268,000
1951	150,000	1955	1,228,000
1952	200,000	1956	1,395,000
3d supplemental pay	16,000	1957	[1] 1,878,000
1953	760,000		

[1] And in addition $35,000 to be derived by transfer in the 3d Supplemental Appropriation Act, 1957.

Itemization of estimate

	Estimate, 1957	Estimate, 1958
Program and financing:		
Total obligations	$1,878,000	$1,939,000
Appropriation	1,878,000	1,939,000
Obligations by objects:		
01 Personal services	212,000	214,000
02 Travel	11,000	9,500
03 Transportation of things		
04 Communication services	6,000	6,000
05 Rents and utility services	1,000	
06 Printing and reproduction		
07 Other contractual services	1,641,000	1,684,000
08 Supplies and materials	4,000	4,500
09 Equipment	3,000	7,000
11 Grants, subsidies, and contributions: Contributions to retirement fund		14,000
15 Taxes and assessments		

AREA AND HYDROELECTRIC PROJECTS

Chairman HAYDEN. Mr. Leavy, you may proceed with your statement.

Mr. LEAVY. Mr. Chairman and gentlemen of the committee, you are of course already acquainted with the statutory authority for the Southeastern Power Administration and with the activities for which the agency is responsible. I would, however, like to invite your attention to the map attached to your copies of this statement which shows the area and the hydroelectric projects with which we are concerned and the table of capacity installations at the projects which is the second attachment to the statement.

Chairman HAYDEN. Without objection, that may be inserted in the record.

(The information referred to follows:)

Current year status of generating capacity

	Kilowatts operating at December of current year	Kilowatts under construction for operation in—					Total
		Current year	Budget year	Fiscal year 1959	Fiscal year 1962	Fiscal year 1963	
1. Wolf Creek	270,000						270,000
2. Center Hill	135,000						135,000
3. Dale Hollow	54,600						54,600
4. Allatoona	74,000						74,000
5. Philpott	14,000						14,000
6. John H. Kerr	204,000						204,000
7. Clark Hill	280,000						280,000
8. Jim Woodruff		30,000					30,000
9. Buford		40,000	46,000				86,000
10. Old Hickory		25,000	75,000				100,000
11. Cheatham			12,000	24,000			36,000
12. Fort Gaines					32,500	97,500	130,000
Total	1,031,600	95,000	133,000	24,000	32,500	97,500	1,413,600

TOTAL CAPACITY

Mr. LEAVY. You will note that there are 9 projects now operating with more than 1 million kilowatts of capacity installed. The total of installed capacity at the end of the budget year will be approximately 1¼ million kilowatts.

The output of the projects is being sold under 119 long-term contracts and 4 short-term, interim agreements. The entire output of the first three projects shown on the table (Wolf Creek, Center Hill, and Dale Hollow) is being sold to the Tennessee Valley Authority under a long-term contract. The output of the first unit at the Old Hickory project is being sold to the Tennessee Valley Authority under a short-term, interim agreement. The Georgia Power Co. is purchasing the entire output of the Allatoona project under a long-term contract. The Appalachian Electric Power Co. is purchasing the output of the Philpott project under a short-term, interim agreement and the Florida Power Corp. is purchasing the output of the Jim Woodruff project under a short-term, interim agreement. Two-thirds of the output of the John H. Kerr project is being sold under long-term contracts to the Virginia Electric & Power Co. and to 17 rural electric cooperatives of Virginia and North Carolina. The remaining one-third is being sold under long-term contracts to the Carolina Power & Light Co. and to 16 preferred agencies in North Carolina.

Clark Hill project power allocated to South Carolina is being sold to the South Carolina Public Service Authority and the Greenwood County Electric Power Commission under long-term contracts and to the South Carolina Electric & Gas Co. under a short-term, "when, as and if" contract. Clark Hill power allocated to Georgia is being sold under long-term contracts to the Georgia Power Co. and to 37 rural electric cooperatives and 42 municipalities in Georgia.

STATUS OF REVENUES

The status of revenues is set forth on the table which is the third to the statement.

Chairman HAYDEN. Without objection, that may be inserted in the record.

(The information referred to follows:)

Status of revenues

Projects	Fiscal year 1956 (actual))	Fiscal year 1957 (estimated)	Fiscal year 1958 (estimated)
Wolf Creek, Center Hill, Dale Hollow	$5,070,000.00	$5,070,000 00	$3,950,000
Old Hickory		84,600.00	1,044,000
Cheatham			69,000
Allatoona	847,214.50	916,378.50	1,048,000
Buford			1,524,600
Jim Woodruff		270,376.25	1,378,800
Clark Hill	1,868,930.02	3,163,811.63	4,388,200
Philpott	205,860.30	108,241.50	217,100
John H. Kerr	3,452,553.51	4,050,695.65	4,542,500
	11,444,558.33	13,664,103.53	18,162,200

TOTAL REVENUES

Mr. LEAVY. You will note that last year's actual revenues reached a total of almost $11½ million. We estimate that the total of this year's revenues will be increased to over $13½ million, and that the total revenue for the budget year will be still further increased to over $18 million.

It is anticipated that during the current year or early in the budget year long-term arrangements will also be concluded for the sale of the output of the Philpott, Jim Woodruff, Buford, Cheatham, and Old Hickory projects.

An appropriation of $1,939,000, consisting entirely of "Operation and maintenance" funds, is requested for the activities required to prosecute these objectives. The activities are "System operations and maintenance," "Purchase of energy and wheeling charges," "Power contracts and rates" and "General administration." The sum of $1,681,000, or over 85 percent of the total appropriation, is requested for purchase of energy and wheeling charges, to be devoted exclusively to the purchase of firming energy and the payment of wheeling fees which will occur during the budget year operation of the existing contracts with the Virginia Electric & Power Co., the Carolina Power & Light Co. and the Georgia Power Co.

It will accomplish service to 17 preferred agencies at approximately 80 points of wholesale delivery in the service area of the Virginia company, to 16 preferred agencies at approximately 65 points of wholesale delivery in the service area of the Carolina company, and to 79 preferred agencies at approximately 225 points of wholesale delivery in the service area of the Georgia company. The amounts requested are based on the estimated requirements under average conditions rather than the requirements which would occur under adverse water conditions.

The budget year objectives represent an increase in work over the current year. No corresponding increase in personnel is contemplated by the requested funds for the direct operation and maintenance of the agency headquarters. Rather, the $258,000 requested for this purpose provides for a continuation of the agency's working force at the current year level.

INTEGRATION OF PROJECTS

Chairman HAYDEN. What consideration is being given to integrating these projects in order to provide for maximum efficiency in your operation?

Mr. LEAVY. We propose to integrate the operation of the Philpott and the Kerr projects and the contracts which we now have provided for wheeling for that purpose. The integration has not actually been accomplished because we have not made long-term arrangements for the sale of Philpott power. It appears, however, that we may sell the Philpott power in the Detco service area to the cooperatives now receiving Kerr power and the integration will then be accomplished. We expect to do something on that within the next few months.

We also propose to integrate the operation of the Clark Hill, Buford, Allatoona, and Jim Woodruff projects, and we have reached agreement with the Georgia Power Co., although the contract has not actually been executed on a transmission arrangement which will provide the necessary transmission to accomplish that integration.

Chairman HAYDEN. We thank you for your statement.

We stand in recess until 10 o'clock Monday morning.

(Whereupon, at 11:20 a. m., Friday, June 14, 1957, the subcommittee recessed to reconvene at 10 a. m., Monday, June 17, 1957.)

PUBLIC WORKS APPROPRIATIONS, 1958

THURSDAY, MAY 16, 1957

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to call, in room F–39, the Capitol, Hon. Carl Hayden (the chairman) presiding.

Present: Chairman Hayden, Senators Young, Thye, and Mundt.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

OPENING STATEMENT BY THE CHAIRMAN

Chairman HAYDEN. The subcommittee will come to order.

This is a subcommittee of the Subcommittee on Public Works, of the full Committee on Appropriations having responsibility for the Bureau of Reclamation and Power Marketing Agencies of the Department of the Interior.

The purpose of our meeting this morning is to hear delegations from the States of South Dakota and North Dakota.

Senator Mundt, if you will present the witnesses from your State, we will be greatly obliged to you.

Senator MUNDT. Thank you, Mr. Chairman. I will be glad to do that.

First, I have statements from some of the witnesses who have had to leave Washington and return home. To accommodate both of the States, North Dakota and South Dakota, we have scheduled the hearing for one day.

STATEMENT OF A. M. EBERLE

Dean Eberle, dean of agriculture of South Dakota State College, has a prepared statement submitted, which I would like to insert in the record at this point.

Chairman HAYDEN. The statement may go into the record at this point.

(The statement referred to follows:)

STATEMENT OF A. M. EBERLE, DEAN OF AGRICULTURE, SOUTH DAKOTA STATE COLLEGE, RELATIVE TO ADDITIONAL MONEY FOR THE COMPLETION OF THE OAHE UNIT PLANS

South Dakota State College has a definite interest in water resource development of the Missouri and James River Valleys.

State college is a land-grant institution, and is the only institution of higher education in the State that works in the field of agriculture. In this field it maintains a strong teaching staff, carries on research, informs farmers and

homemakers through its Extension Service on all agricultural and homemaking practices, and maintains an action program known as statewide services.

Not only farmers but all the citizens of the State look to the college for their agricultural and homemaking information.

When the Bureau of Reclamation started to investigate the possibilities of irrigation in the James River Valley in late 1940, State college was contacted for all available information about the State. The contacts between the Bureau and the college have been maintained during the entire period of planning and the college is very anxious that the planning be completed as soon as possible.

All the studies of State college points to the fact that water resource development is a "must" in this midcontinent area. That the development of this resource is a first priority in the future progress of South Dakota.

STABILIZED AGRICULTURE

The proper water resource development would stabilize the State's agricultural production, and would minimize the effects of droughts. Two disastrous droughts of 3 to 5 years or more, have occurred since 1900 and many others of 1 to 2 year's duration since settlement of South Dakota. There has been only 1 year in the last 20 years, when South Dakota received a good small-grain and corn crop the same year.

Data covering 88 years in this, and the immediate adjoining area, show that during 28 percent of these years the crops produced ranged from total failure to such low yields as to bring some degree of want and privation to the farmers. This situation could be compared to the man on a salary who was getting $5,000 for a term of years and then suddenly the salary is cut to $3,000 for 1, 2, 3, or more years.[1] It is difficult to adjust to such a variation.

It has been estimated that with irrigation in the proposed Oahe project, stabilization will come, not only to the 500,000 or more acres to be irrigated but also to an additional 3 million acres, broken down about as follows, 1,500,000 acres directly integrated with irrigated lands, 250,000 acres producing some supplemental feeds in normal years, and 1,250,000 acres will have a feed supply in drought years. This will occur because the Oahe project lands are surrounded by hundreds of thousands of acres producing feeder livestock and these livestock will flow to the project lands for feeding and maintenance and some feeds from the project will go out to the surrounding areas.

The crops coming off of land receiving water from the development will be mainly livestock feed, such as alfalfa, grass, pasture, and corn. South Dakota is a natural for legume and hay and seed production in this area. This program, too, is in accord with good, sound, soil-conservation practice.

At the present time the area has a rotation of corn, oats, wheat, and grass. Because of the lack of rainfall, it is restricted in what it can raise. Under irrigation an area has a greater choice of crops, so if one is in large supply, it can make a choice of a crop in lesser supply. Since this Oahe development is a longtime program, all available information points to the fact that by the time the project gets into full production, surpluses will have disappeared and that greater quantities of food will be needed.

Rainfall in the Oahe project area of South Dakota, for which area we are recommending additional money for planning, is not adequate in normal years to bring out the productive capacity of the land. A diversified cropping program in the James Valley between Huran and Aberdeen requires 31 inches of rainfall annually, assuming only 80 percent of this is effective. Over this area the rainfall averages only 19 inches. In the areas immediately west of the James Valley, the rainfall requirement is 34 to 35 inches annually, if full production is to be realized, whereas the average annual precipitation is 16 inches.

Lack of stability in the production of crops can be shown by a study in Hand County. Taken from a USDA publication, Climate, the Limiting Factor in Hand County Agriculture.

[1] See USDA publication, Climate, the Limiting Factor in Hand County Agriculture, with additions by Bureau of Reclamation; also attached graph and table about precipitation and corn-wheat yields at Redfield, S. Dak.

Types of crop producing season, 1862–1949

	Type	Number	Percent
Crops that satisfied the farmers	Good	34	39
Crops that were disappointing but did not cause hardship generally.	Fair	29	33
Crops that ranged up to total failure, brought some degree of want and privation.	Poor	25	28
Years		88	

From this brief statement of fact regarding the agricultural instability of our State, you can readily see why South Dakota State College is interested in having the Bureau of Reclamation complete its planning.

In addition to the stability that will come to agriculture, full water resource development will also:

1. Furnish adequate supplies of water for an increasing State population.
2. It will open up opportunities for people and will keep people in the State for all uses.

ADEQUATE SUPPLIES OF WATER FOR AN INCREASING POPULATION

Full water resource development of these two great river valleys and the adjacent lands, will provide homes, jobs, businesses, and opportunity for thousands of people and add an additional 3,537 new farms.

Under present conditions this area has about reached its peak in agricultural and allied development. Of course technological improvements will perhaps create some new opportunities in the future but not very many.

Statistics show that the population of South Dakota varies almost directly with the precipitation, or water supply, of the State over a period of years. In 1900 the population of South Dakota was 401,570. In 1930 it was 692,849. In 1950 it was 652,740, or a decrease of 40,109 people in the 20-year period. During this 20-year period there was a natural increase (births over deaths) of 161,828. Thus the out-migration from South Dakota was 201,937 people.

Brown, Spink, and Sully counties, that are in the Oahe project, during 1930 and 1950 lost all of their natural increase of 11,451 and an additional 3,080 people.

Proper use of water will prevent such loss of population.

In reference to the farm-rural population on the Belle Fourche irrigation project, the South Dakota Experiment Station Bulletin 450, May 1955, gives the following figures, density of population per square mile:

	1950	1940	1930	1920
Butte County	1.2	1.8	2.2	2.0
Irrigation project	8.5	11.7	10.5	13.3
Countyless project	.5	.9	1.3	.9

OPPORTUNITIES FOR PEOPLE AND INDUSRTY THROUGH IRRIGATION DEVELOPMENT

Water resource development would encourage industrial development. South Dakota has an amply supply of water, if it is properly managed.

The State has the Missouri River, two dams and reservoirs completed, and a third under construction. This will supply an environment for industry because of the availability of water and power. With irrigation fully developed, raw material would become available in ample supply for processing by industrial concerns.

We need to build up industry in this midcontinent area for national defense, welfare, and the common good.

Full water resource development means more electrical power can be generated and distributed to thousands of farms, to urban areas, as well as for industries.

NEED COMPLETED PLAN

The initial plan for the development of the west side of the James River, using Missouri River water, covered about 750,000 acres of lands. Details of how this was to be worked out was a task begun by the Bureau in late 1940. As the investigation proceded, changes in the original plan had to be made, because facts regarding soils, drainage, topography, and other factors were brought to light that were not known when the original plan was set up.

Investigations up to this time indicates that 554,000 acres should be considered. Four hundred twenty-seven thousand acres lie in the James River Valley on both sides of the James River and 81,000 acres lies in the Missouri slope area, which is west of the James River Valley. Because of the shift in the area suited for irrigation, it became necessary for the Bureau to make changes in the original plan. It is these changes that makes it necessary to ask for additional money and additional time to complete the investigation.

The Bureau of Reclamation has made a preliminary report and many answers that the public have been asking, were answered in a tentative way. Additional information and more direct answers are needed. The Bureau is to be commended for the information and concise report given the public as to their findings to date. They have made real progress and it looks like, on the verge of coming up with definite facts and figures.

State College, along with the people of the State, want to see the investigations continued on a more extended basis, want to see consideration given to the full utilization of our water resources, want the Bureau to interpret their findings and make them available to the farmers of the areas concerned in a clear, understandable languge. The farmers will judge the worth of the project, after they have all the above facts.

This is not possible unless the Bureau of Reclamation completes their study. They can only do this with additional funds for planning.

South Dakota State College urges this committee to report favorably on the funds so requested and the Congress to approve the recommendation.

STATEMENT OF GREATER SOUTH DAKOTA ASSOCIATION

Senator MUNDT. I also have here a statement from the Greater South Dakota Association of Huron, S. Dak., which I would also like to have inserted into the record, Mr. Chairman.

Chairman HAYDEN. The statement of the Greater South Dakota Association will appear in the record at this point.

(The statement referred to follows:)

The Greater South Dakota Association appreciates the privilege of submitting this statement in support of an appropriation which will permit the Bureau of Reclamation to complete needed investigation studies of the Oahe irrigation unit located in South Dakota.

The Greater South Dakota Association is a statewide business organization supported wholly by business and interested primarily in such activities as will promote the economic well-being of the citizens of our State. We concern ourselves with problems pertaining to agriculture, business, industry, taxes, education, highways and tourists, and statewide publicity. In this latter category, we seek to develop publicity materials that will show all aspects of economic, social and cultural life in South Dakota. We have been in existence for 20 years.

Since the inception of the Missouri River program in 1944 it has been the policy of the Greater South Dakota Association to encourage irrigation in the State where economically feasible and to disseminate information concerning the problems of irrigation farming. Such information has been based upon the economic studies made by the Bureau of Reclamation in cooperation with South Dakota State College and other agricultural and civic agencies. We feel that we have reached that stage in the promotion of irrigation in South Dakota that farmers and landowners, in areas regarded as suitable for irrigation, have more detailed knowledge on costs, production problems, additional varieties of crops adaptable for the area when grown under irrigation and a host of similar questions. What is needed are decisive answers to important questions raised by farmers.

We believe that the Interim Information Report, Oahe Unit, which was released by the Bureau of Reclamation in the summer of 1956 does provide sufficient information to justify the completion of the studies which are so badly needed

by the individual farmers and landowners. When these investigations are completed the farmers will have the necessary information to decide whether they are in favor of farming their lands under an irrigation program.

Our view point on anything which will affect the agricultural economy of South Dakota is based on the fundamental proposition that a prosperous agriculture plant is essential to the entire economy of this State. Consequently, much of our activity is centered in promoting the improvement of our livestock, crops, and our cash farm income on the basis of sound research. As we see it, the request which we are making of this committee is in line with the reasoning that research is sound and necessary. The investigation studies are basically applied research to determine answers that must be known in advance before good solid decisions can be made.

To summarize our position, we believe that sufficient funds should be made available to the Bureau of Reclamation to permit continued research to—

(1) Present factual information to individual landowners and farmers relative to the cost involved, ground water recharge, where the network of canals will be located, and the estimated yields of a variety of crops that can be reasonably expected.

(2) Determine what added water resources may be available in the Oahe unit area for domestic, municipal, and industrial consumption and the costs to water user that are associated by such miscellaneous uses of water.

(3) Determine the production potential of feed crops for the feeding of livestock for the reason that South Dakota is primarily a livestock State, livestock accounting for 65 to 70 percent of the annual State cash farm income. We need stabilized feed and forage crop production to protect this industry during dry years.

We are not offering any new legislative proposals. We urge only the continuation of the investigations in order to develop information necessary for the decisions that must be made at the farm unit level.

Your committee doubtless knows that there are substantial acreages already being irrigated in South Dakota. But, what the committee may not know is that there have been many applications by individual farmers in eastern South Dakota who are seeking water rights and permits to irrigate by tapping underground water supplies. The hunt for water is being aggressively pursued in South Dakota as it is elsewhere around the Nation. The great dams built or being built in this State impound great quantities of water some of which is earmarked for irrigation. Our present concern is in utilizing such water for beneficial consumptive purposes in our State in order that we might have a more prosperous and stable agriculture which in turn will provide greater diversification to the entire economy of this State. The information that we desire in the end will save money by pointing out what should not be done as well as what can and should be done.

Respectfully submitted.

THE GREATER SOUTH DAKOTA ASSOCIATION,
By: C. IRVIN KRUMM, *Executive Manager.*

RESOLUTION AND LETTERS

Senator MUNDT. Then we have sundry resolutions and letters. One is from the stockholders of the First National Farm Loan Association. We have a letter from Naomi Adams, secretary of Lake District Pomona Grange No. 3, Watertown, S. Dak.; a letter from Alner G. Snesrud, who is a member of the Urban Grange, near Hermosa, S. Dak.

Then we have also several other letters. One of them contains a resolution from the Mile High Grange No. 224, signed by Leslie M. Parsons, who is master of that grange.

We have a letter from the Beadle County Pomona Grange, signed by its secretary; also a letter from the Jolly Fairfield Grange No. 203, signed by the secretary.

We also have a resolution from the South Dakota State College Alumni Club of Beadle County.

Then we have a letter signed by Ward Radcliffe, president of the Beadle County Farm Bureau, and also a letter from Ben Radcliffee,

South Dakota State representative, representing Spink County, and a letter from Royhl, Benson & Beach, attorneys at law in Huron, S. Dak.

Chairman HAYDEN. All those documents may go into the record at this point.

Senator MUNDT. Thank you, sir.

(The documents referred to follow:)

RESOLUTION REQUESTING CONGRESS TO CONTINUE THE APPROPRIATION FOR THE JAMES RIVER VALLEY IRRIGATION STUDIES

Whereas the Department of the Interior has spent considerable sums in investigating feasibility of irrigation in the Missouri Basin; and

Whereas there has been some doubt in the eyes of the administration as to the interest of residents of the valley in irrigation; and

Whereas we believe that there is definite possibility of irrigation value in the basin; and

Whereas we believe that there is considerable interest in irrigation for the future of the valley: Therefore be it

Resolved by the stockholders of the First National Farm Loan Association, in this 40th annual meeting, That we go on record, requesting the Congress of the United States to continue the appropriations for investigating the feasibility of irrigation in the Missouri Basin, and the James River Basin, in particular; and be it further

Resolved, That the board of directors of the First National Farm Loan Association of Redfield, S. Dak., be and is hereby directed by the members to forward the above resolution to the South Dakota Senators and Representatives in United States Congress, urging them to work for and promote the studies of irrigation in the above named valleys.

In regular meeting, March 14, 1957.

A. T. KITTERMAN,
President.
R. W. WILLIS,
Secretary-Treasurer.

WATERTOWN, S. DAK., *March 16, 1957.*

Senator MUNDT,
Senate Office Building,
Washington, D. C.

DEAR SIR: Lake District Pomona Grange No. 3 urges the completion of the proposed Oahe irrigation project and requests you to be of all assistance possible.

Yours truly,

NAOMI ADAMS, *Secretary.*

RAPID CITY, S. DAK., *March 2, 1957.*

Hon. FRANCIS CASE.
Hon. KARL MUNDT.
Hon. E. Y. BERRY.

DEAR SIRS: At a regular meeting of Urban Grange, near Hermosa, S. Dak., held last evening, the following resolution was approved:

"*Resolved,* That there is definitely a need for irrigation in the James River area of South Dakota even though there is a temporary oversupply of some of the farm products. This irrigation project obviously cannot be constructed on short-time notice but needs long-time planning and should be included in the overall plans for Oahe project.

"We therefore urge that sufficient funds be appropriated to continue and complete the planning of the Oahe irrigation project, with the view in mind of proceeding with the actual construction as soon as possible."

While this area of the State is not directly interested in this project, the members of the grange felt that what affects other parts of the State would also affect them, indirectly.

Respectfully yours,

ALNER G. SNESRUD,
Member of Urban Grange.

CUSTER, S. DAK., *February 23, 1957.*

Senator KARL MUNDT,
Washington, D. C.

DEAR SENATOR MUNDT: At a meeting of the Mile High Grange No. 224, the evening of February 21, the following resolution was unanimously voted.

Yours truly,

LESLIE M. PARSONS,
Master, Mile High Grange.

RESOLUTION

Whereas a large sum of money has been expended on the Oahe irrigation project we wish to urge in the interest of the needs and of economy that this project be carried to completion as speedily as possible. We, therefore, petition Congress to make such appropriation as is necessary for the completion of the work. Abandonment would leave a glaring monument to waste and mismanagement.

LESLIE M. PARSONS,
Master, Mile High Grange No. 224.

HURON, S. DAK., *February 19, 1957.*

Hon. KARL MUNDT,
Washington, D. C.

DEAR SIR: We, the members of Beadle County Pomona Grange, would urge that appropriations be made for completion of investigation of irrigation from Oahe Reservoir.

Yours truly,

BEADLE COUNTY POMONA GRANGE,
MRS. MABLE URBAN, *Secretary.*

HURON, S. DAK., *February 5, 1957.*

Senator KARL MUNDT,
Senate Office Building, Washington, D. C.

DEAR SENATOR: At the January meeting of Jolly Fairfield Grange, No. 203, I was instructed to write you that we are interested in the Oahe irrigation project.

There is definitely a need for irrigation in this area even though we have a temporary oversupply of some farm products at the present. This is a project that obviously cannot be constructed on the spur of the moment; therefore we urge that sufficient funds be appropriated to continue and complete the planning work of the proposed Oahe irrigation project with a view of proceeding with the actual construction work as soon as possible.

Sincerely yours,

DONALD N. OLSON,
Secretary of Jolly Fairfield Grange No. 203.

RESOLUTION

The South Dakota State College Alumni Club of Beadle County, S. Dak., by unanimous vote at their meeting held in Huron, S. Dak., on January 26, 1957, adopted the following resolution:

RESOLUTION PETITIONING THE CONGRESS OF THE UNITED STATES TO AUTHORIZE THE BUREAU OF RECLAMATION TO COMPLETE FEASIBILITY STUDY OF THE OAHE IRRIGATION UNIT AND APPROPRIATE THE FUNDS THEREFOR

Whereas the general economy of South Dakota, and with special reference to the Oahe unit area, is almost entirely dependent upon agriculture; and

Whereas lack of rainfall is the greatest cause of variation of agricultural production and income; and

Whereas a study by South Dakota State College shows that even with stable farm prices the coefficient of variation of labor income on dryland farms would be 101 percent, and on an integrated irrigation-dryland farm in the same area the coefficient of variation of labor income would be only 30 percent; and

Whereas the Flood Control Act of 1944 provided water for the irrigation of nearly 1 million acres in South Dakota; and

Whereas this allocation is one of the greatest natural assets of South Dakota; and

Whereas the development of irrigation in South Dakota has fallen far behind that of some of the other States; and

Whereas if South Dakota does not progress more rapidly with its potential irrigation development it will be faced with a subsequent loss, to their interests, of its great water resources previously allocated to it; and

Whereas if this study is completed in the immediate future, South Dakota will be in a position to proceed with development when the need arises; and

Whereas the opportunity to get the blueprint for possible irrigation development is now: Now, therefore, be it

Resolved, That the South Dakota State College Alumni Association of Beadle County, S. Dak., hereby urges the present session of the Congress of the United States to authorize the Bureau of Reclamation to complete with all reasonable speed the feasibility study of the Oahe irrigation unit and to appropriate the funds for such study.

ISABELLE T. STALEY,
Secretary, State College Alumni Club of Beadle County, S. Dak.

BEADLE COUNTY FARM BUREAU,
Wessington, S. Dak., February 1, 1957.

DEAR SENATOR MUNDT: Whereas years of planning are necessary to secure needed information and to draw up the necessary working plans for irrigation projects, and whereas only the preliminary planning for the Oahe project has been completed, and whereas because of variable and often deficient rainfall in this area, irrigation is needed. Therefore we, the Beadle County Farm Bureau urge the continuation and completion of the planning and the beginning of the construction work on the feasible portions of the Oahe project as soon as possible.

Yours truly,

WARD RADCLIFFE,
President of the Beadle County Farm Bureau.

HITCHCOCK, S. DAK., *May 11, 1957.*

CONGRESSIONAL APPROPRIATIONS COMMITTEE,
Washington, D. C.

GENTLEMEN: The Legislature of South Dakota in recent session did pass a resolution memorializing the congressional Appropriations Committee to appropriate funds to complete investigationss and studies of the Oahe Missouri River Basin project, by the Bureau of Reclamation.

Since copies of the resolution were forwarded to the Interior and Insular Affairs Committees of the United States Senate and the United States House of Representatives and the Secretary of the Interior, as well as to the South Dakota congressional delegation, you have no doubt had the resolution before your committee.

As a member of the South Dakota Legislature and as a farmer living in the proposed Oahe irrigation area, I have been quite cognizant of grassroots reaction to the prospects of irrigation in the area, and I firmly believe that the legislature in passing House Concurrent Resolution 8, expressed the views and wishes of the people living within the proposed irrigation area, as well as the citizens of the entire State. The resolution passed the legislature without a dissenting vote.

Frankly, there is some apprehension on the part of a few farmers as to the cost and feasibility of irrigation in this area and such concern can, of course, be best satisfied by a speedy completion of the investigation. A great majority of our residents are, however, quite enthusiastic over the prospect of irrigation in the area and what may have been construed as apathy on their part in the past, I believe stems from the fact that until recently we believed that completion of the investigation was definitely in the program and would be carried out expeditiously. Discovery that the investigation may be brought to a close without completion has caused considerable concern in the area and

most farmers are willing to take whatever steps are necessary to see that their dream of irrigation in the Oahe Basin is explored to the fullest.

I urge your wholehearted support of this appropriation.

Respectfully,

BEN RADCLIFFEE,
South Dakota State Representative, Representing Spink County.

HURON, S. DAK., *May 10, 1957.*

APPROPRIATIONS COMMITTEE OF THE UNITED STATES CONGRESS,
Washington, D. C.

GENTLEMEN: By way of introduction, I am 33 years old, a practicing attorney in Huron, S. Dak. I was born here. I married a girl from Bridgewater, S. Dak., and neither she nor I own any farm property which would benefit from the proposed Oahe-James River irrigation project.

This does not mean, however, that we have no interest in such a project. All of us in this area have a vital interest in studies to determine feasibility of irrigation in the Oahe-James River area. If you will permit the time, I should like to explain this interest.

My grandfather came to Beadle County, Dakota Territory, as a young man in 1882. He homesteaded in this county, and spent his active years in the real-estate and insurance business in Huron. He did not retire—money was not that plentiful, following the "dirty thirties." Even so, he had great faith in the lands. He died in 1944.

However, I recall clearly one evening in the Dust Bowl days, about 1938, when he and I attended a showing of the Passion Play at the Huron College auditorium. It was a hot, dry, dusty summer evening. While we were there, storm clouds blew over from the west, accompanied by a high wind and a violent thunderstorm. And we silently prayed for rain.

As we left the auditorium, a few drops spattered on us. They were so full of the dust in the air, they were literally drops of mud. We walked on in bitter silence. Finally my grandfather spoke: "Don't ever settle down in South Dakota." This from a man with great faith in the land, a man who had lived here for better than 50 years.

Subsequently, I saw much of this country of ours while on duty in the United States Navy. I have lived in Maryland, Massachusetts, Idaho, Florida, California, Illinois, and New Mexico. But when the announcement was made about the Pick-Sloan plan, I resolved to return to Huron to live. My decision was based largely on the potential here because of irrigation possibilities. I know of many others whose similar decision resulted from the same consideration.

Are we now to be confronted with the choice of staying and watching the land parch and blow again, or of uprooting our families and moving? And this before we even know whether or not substantial irrigation is feasible?

Of far greater importance than what happens to us is the question of what happens to our Nation. Agricultural land is being cemented under or roofed over at an alarming rate, and before long—in our lifetime—we will be faced with the problem of agricultural scarcity. Would it not be far wiser and more economical to develop irrigation programs in an orderly fashion now, rather than to direct a crash program, with its inherent waste, when the pinch is on us? Why "too little and too late" when we can foresee the problem?

Another item: God was with us in World War II. At the time we needed the food and fiber for the war effort, the rains came. Can we depend on it happening again? It would be calamitous to have Dust Bowl conditions during a war emergency. Why run this risk, when there is irrigation potential waiting to be developed?

Gentlemen, we are dealing with navigable waters, within the jurisdiction of the United States Congress. This is a program "which we cannot do at all, or cannot do so well for ourselves," and in which we appeal for your help, in the form of appropriations to complete the feasibility study by the Bureau of Reclamation. For those of us who stake our future on the program, for the benefit of the Nation as a whole, for your own enlightened self-interest, we urge this appropriation.

Very truly yours,

CHANDLER L. BEACH.

MISSOURI RIVER BASIN

STATEMENT OF HON. JOE FOSS, GOVERNOR OF THE STATE OF SOUTH DAKOTA

GENERAL STATEMENT

Senator MUNDT. We also have our distinguished Governor as head of the delegation, Mr. Chairman.

I would like to introduce my good friend, Joe Foss, Mr. Chairman.

Chairman HAYDEN. Very well. We will be glad to hear you, Governor.

Governor Foss. Mr. Chairman, before I proceed, I would like to say that I have copies of my remarks here but I will not read the prepared statement.

Chairman HAYDEN. We will be glad to include your complete statement in the record and you may proceed as you wish.

(The statement referred to appears at the conclusion of Governor Foss' oral presentation.)

Governor Foss. Thank you, Mr. Chairman.

I am Joe Foss, Governor of South Dakota. I certainly appreciate the opportunity to appear before the committee for the purpose of supporting the appropriations for the funds to carry forward the great development on the Missouri River Basin.

We in South Dakota have supported the program to control and develop the Missouri River as authorized by the Flood Control Act of 1944 and the various supporting documents.

On this program, of course, we stand to gain a lot out of it, that is for certain. But, at the same time, we must take into consideration the fact that on the bottoms of the lakes that will be created by the various dams in the State, that actually we will lose close to half a million acres of our richest agricultural lands on the river bottoms.

As a result, of course, we try to think of all of the various byproducts that will be provided by the dams and see to it that we can repay some of the losses to our economic structure and to the citizens of the State. One of these, of course, is through the form of irrigation. That is what we are dealing with here today.

My request is that your committee provide as closely as possible the funds in the amount of the President's request for fiscal year 1958 to continue the work of the Corps of Engineers and the Bureau of Reclamation.

OAHE UNIT PLANNING FUNDS

One item in the 1958 request for funds concerns my State very much. This item is part of the Missouri River project investigation request for the Bureau of Reclamation. It consists of $360,000 for carrying forward the planning of the Oahe unit in South Dakota.

Except for last year, when your committee saw fit to reduce the amount drastically, the amount requested is considerably less than that provided in prior years for Oahe unit work.

I understand, also, that the report is favorable even though the basis for the feasibility analysis is the most conservative approach possible, being for irrigation, alone, without considering the rather unusual possibility for multiple water use and benefits inherently possible in this development.

The Oahe unit investigations should be carried to completion as expeditiously as possible so the farmers and the rest of us in the State may make the decisions and do what we have to do if the project is to be constructed.

Chairman HAYDEN. In other words, what you want is full information upon which to base a final judgment, is that correct?

Governor Foss. That is right, sir.

The way it stands right now, considerable money has been spent. The figure, as I recall it, is five million and some-hundred-thousand dollars. You probably have the figure. That amount has been spent.

Some people might say that that should have been enough so that the entire study should have been completed.

I would like to point out that part of the study has taught us a great lesson. It has shown us, in the first place, that the idea was that the area would extend to the south as far as Mitchell and way down in the James River Valley.

Actually, the study to date has shown that the area should be to the north and west of the old site which was originally indicated. They have learned a lot from the study so far.

Everyone that is looking into the future would like to see the study completed so that then a determination can be made as to the feasibility of continuing with an irrigation program. This does not mean that if study funds are granted, that irrigation will be forced upon anyone. It is merely getting the answers to the questions that are still left unanswered.

Some will say that, well, they have had plenty of time to work on the questions and that they should have all of those answers. But the fact remains that they do not. And why is that?

It is because they can only do so much with the money that is provided for them, and they use that to the very best of their ability.

When I say "they," I mean the Bureau of Reclamation.

In their long and tedious work, they have to drill the entire area, you know, and there are various things that they have to go into when they are making a determination as to whether or not the program is feasible.

If we were to not go ahead with this study, the people in the future at some time would have to take up and complete the study.

It is true, of course, that today we have a large surplus and we are not worrying about production, but as the pendulum swings the other way, with the country increasing at the rate of 2½ million people a year, with an increase of 25 million people in the last 10 years, the situation will be quite different. The pendulum is going to swing back the other way.

So that while you folks in Congress and we out in the country worry about solving agricultural problems, I think the day will actually come when the pendulum will swing back to production again and we will have to put the emphasis back on the other side.

From time to time the old pendulum of supply and demand sways back and forth, and people will be taking credit for various things that go on.

Chairman HAYDEN. I have seen the statement that 3 million babies are born every year in the United States. Somebody has to be able to feed them.

Governor Foss. That is right.

So this area that is affected by this program would be somewhere in the neighborhood of a half-million acres. It would be just about the amount that you would be losing under the dam.

The opposition, of course, maintain their opposing views, and they will be represented here today. They would like to see the study money not be provided. They maintain it would be easier to kill an irrigation program now than to find out the answers and go on at that stage and then try to kill it if an irrigation program was to be carried out at a later date.

Of course, they are probably right. It would be easier to kill the program now than it would be at some later date.

All of the people that are interested in this are not necessarily in favor of irrigation. What they would like to know is whether or not this program is feasible. That is the one question.

I will leave that now and just take a short-cut here to go on to some of the things I have included in my statement.

TOTAL EXPENDITURES

Senator MUNDT. Governor Foss, that figure that you gave us previously as to the amount already expended has been looked up by our able clerk here. It is $4,326,000. So that this money will be something under $5 million to be appropriated.

Governor Foss. Probably the figure you are interested in is what it will cost to complete the study. The last figure I got is that they estimate it would take about $1.5 million, or close to that. The total cost would probably be $3 million.

Some people feel that the Bureau of Reclamation has not gotten into high gear as they should have on this thing. But, actually, in all those programs the fact remains that you go just as fast as the money provided allows you to. So that oftentimes we tend to wonder just why things have not been carried to completion, and then we take a look at the other side of the ledger and see how much money we have provided, and we see that there is a very good reason for it.

Thank you kindly.

Senator MUNDT. You might call attention to the resolution attached to your statement, Governor.

RESOLUTION OF STATE LEGISLATURE

Governor Foss. That is right. I have attached to my statement a copy of the house concurrent resolution No. 8, introduced by our house agriculture committee in the last session of the State legislature. It is a concurrent resolution memoralizing the congressional Appropriations Committee to appropriate funds to complete investigations and studies of the Oahe unit of the Missouri River Basin project by the Bureau of Reclamation.

As I recall, this resolution passed both houses in our State legislature unanimously. In our senate, the senate was made up of 18 Republicans and 17 Democrats. So it would give you a slight idea as to the unanimity on it; that there must be some agreement on it. In the house side I believe there were 29 Democrats and 46 Republicans.

COST OF DELIVERING IRRIGATION WATER

Chairman HAYDEN. I might say, Governor, that I have looked at the portion of that resolution where questions are asked about the cost of delivering irrigation water to farmer-consumers and also about the cost of delivery of water to municipalities. I think those are very sound questions and that you ought to have the answers to them.

Senator MUNDT. Those are the kinds of questions, Mr. Chairman, that we in Congress get 2 or 3 times a week from individual farmers and the mayors of small towns and communities. I might say it is a frustrating and unrewarding experience to call upon the Bureau and not be able to get any information to answer the questions that some of the constituents are concerned about.

A man may not want to irrigate, he may want to avoid doing it, but he wants to know the facts and the figures, or, contrarywise, it might be somebody who does want to irrigate.

But one thing that is obvious is that throughout the area out there there is a growing population, and it would be good to know what its impact is on municipal water supplies. One of the important points of this whole program is to learn whether or not from this Oahe Reservoir and the diversion unit it would be possible to build up and revitalize the water supplies of our smaller communities and our municipalities.

So you will notice that one question that the State legislature asks—and which is also a question that has been asked of me many times in correspondence—is what would be the cost of delivering water to municipalities, quite apart from any possible agricultural use?

TOWNS INTERESTED IN WATER SUPPLY

Governor FOSS. Actually, in that area there are 40 towns that would be affected. There are 40 towns that are interested in the water supply, which is a very critical item. One of the towns included in the area happens to be the third largest town in the State, and that is Aberdeen.

Senator MUNDT. I might say that the Governor once served as fireman in his hometown, so that his situation right now is not very much different from what it was then, in that he is not having as much water right now as he would like to have.

SALT RIVER VALLEY, ARIZ., EXPERIENCE

CHAIRMAN HAYDEN. They had a very interesting experience in the Salt River Valley in Arizona with a municipal development. We require there about 4 acre-feet of water for crops. That would be the equivalent of about 48 inches of rainfall here in Washington. You can take a farm out there and cut it up into town lots and build houses on it, and they will not require as much water as it would take to irrigate a farm. The municipality can get along with less water in the sense that that particular tract of land will not require as much water to settle it completely as it would if it were kept in farmland.

The reason for that is that a lot of the area is taken up with streets, which do not require any water, and houses will take up space which does not require water. There will be just the lawns and trees and

things of that sort that will require water. The net result is that you do not need as much water there, although you do need some.

Governor Foss. That is right.

PREPARED STATEMENT

Chairman HAYDEN. Thank you very kindly, Governor. Your full statement, along with the resolution attached to it, will appear in the record.

Governor Foss. Thank you, Mr. Chairman.

(The statement referred to follows:)

I am Gov. Joe Foss of South Dakota. I appreciate the opportunity of appearing before your committee for the purpose of supporting appropriation requests for funds to carry forward the great development work in the Missouri River Basin.

We in South Dakota have always supported the program to control and develop the Missouri River as authorized in the Flood Control Act of 1944 and its supporting documents. We have been willing to provide the areas necessary to store the flood flows that have done so much to the lands and properties in other States downstream and to some extent to lands and properties in our own State. A large part of the flood control is now a reality. The storage of the river flows are beginning to control the river and water stages for municipal, industrial, and navigation use are being substantially maintained. New electric power supplies are available to users in parts of the basin.

However, we are not out of the woods. All water users need more water than they are able to get with the facilities now operating. We should get the rest of the works built as quickly as physically and financially possible.

My request is that your committee provide as closely as possible funds in the amount of the President's request for fiscal year 1958 to continue expeditiously the work of the Corps of Engineers and the Bureau of Reclamation.

One item in the 1958 request for funds concerns my State very much. This item is part of the Missouri River project investigations request for the Bureau of Reclamation. It consists of $360,000 for carrying forward the planning of the Oahe unit in South Dakota. Except for last year, when your committee saw fit to reduce the amount drastically, the amount requested is considerably less than that provided in prior years for Oahe unit work. I understand that the Bureau of Reclamation has completed the preliminary feasibility study demanded by your committee. I understand, also, that the report is favorable even though the basis for the feasibility analysis is the most conservative approach possible, being for irrigation alone without considering the rather unusual possibility for multiple water use and benefits inherently possible in this development. The Oahe unit investigations should be carried to completion as expeditiously as possible so the farmers and the rest of us in the State may make the decisions and do what we have to do if the project is to be constructed.

Let me assure this committee that the people in my State are vitally interested in the Oahe unit and other irrigation potentials in our area. So much so that a considerable amount of argument pro and con exists at the present time. Until the Bureau of Reclamation can complete their planning work and give the farmers and others a definite business proposition, differences of opinion in the project area will continue. Under no circumstances should the project planning be left in its present unfinished status.

A number of farmers have statements to make to you today. Please consider what they have to say about the Oahe project.

I wish to add one last observation. The amount of moneys requested for Oahe unit studies during fiscal year 1958, $360,000, is less than usually allowed in years past. If, in your judgment, appropriation cuts are necessary, cut the Oahe unit amount as little as can possibly be arranged.

I appreciate very much this opportunity to appear before your committee. With your permission, I would like to submit this statement and its attachment, a concurrent resolution of South Dakota State government, for your record.

HOUSE CONCURRENT RESOLUTION 8

Introduced by House Agriculture Committee

A concurrent resolution memorializing the congressional Appropriations Committee to appropriate funds to complete investigations and studies of the Oahe unit, Missouri River Basin project, by the Bureau of Reclamation

Be it resolved by the House of Representatives of the South Dakota Legislature (the Senate of the South Dakota Legislature concurring therein):

Whereas the Flood Control Act of 1944 (Public Law 534, 78th Cong.) authorized development of the waters of the Missouri River Basin for multiple purposes; and

Whereas pursuant to said authorization, the Bureau of Reclamation, Department of the Interior, entered into investigations and studies of the Oahe unit in South Dakota for irrigation and other beneficial uses of a portion of the waters of the Missouri Basin; and

Whereas the Bureau of Reclamation has prepared recently a preliminary report indicating feasible relationships for development of the Oahe unit for irrigation; and

Whereas said preliminary report by the Bureau of Reclamation did not contain certain vital considerations, including the estimated annual cost of water to irrigators, which are of important concern to the project area landowners; and

Whereas said preliminary report did not include evaluation and cost of developing the Oahe unit for multiple purposes, in addition to irrigation, as provided in the authorizing act; and

Whereas said preliminary report was made available only recently for information of landowners in the project area, other interested local people, and the people of South Dakota; and

Whereas a bill for creation of an Oahe conservancy district was introduced in the agriculture committee of the House of Representatives of the South Dakota Legislature was considered jointly with the agriculture committee of the Senate of the South Dakota Legislature and, because of lack of time for consideration by the legislature and the people concerned, was referred for further study to the legislative research council of the South Dakota Legislature; and

Whereas appropriation of funds to the Bureau of Reclamation during fiscal year 1957 for needed continuance of investigations and studies of the Oahe unit were inadequate to carry forward the work expeditiously and economically and said appropriations were made subject to limitations on expenditures by the Bureau of Reclamation to such an extent that productive work was stopped during this fiscal year; and

Whereas the magnitude and complexity of providing adequately for the optimum economic potential of the development of the Oahe unit for multiple purposes and benefits to local people, the State of South Dakota, the Missouri River Basin region and the United States is beyond the capability of the State of South Dakota to accomplish: Now, therefore, be it

Resolved, That the Senate and the House of Representatives of the Legislature of the State of South Dakota do hereby memorialize and request the Appropriation Committees of the Congress of the United States to appropriate funds to the Bureau of Reclamation to continue to complete expeditiously the investigations and studies for the Oahe unit, Missouri River Basin project, as a multiple-purpose development in order that the full impact of such a development as a stabilizing factor in the economy of the local area, the State, the Missouri River region, and the United States may be recognized and evaluated: And be it further

Resolved, That the present partially completed study of the Oahe unit, Missouri River Basin project, be considered a worthwhile intermediate step only in the analysis of the potentialities of a most promising addition to the strength and economy of our great country, and that such study be continued by the Bureau of Reclamation with a view of making available to the public and all persons interested therein, adequate and complete answers to the following questions which are deemed to be of first importance in an evaluation of the program and its ultimate benefit to the economic strength of the State.

(1) What will be the cost of delivering irrigation water to farmer consumers?

(2) What will be the cost of delivering water to municipalities?

(3) What volume of unappropriated water will be available and the quality thereof?

(4) What kind of contract will be offered to water users and consumers?

(5) Who is to finance the cost of relocating roads and highways and reconstructing bridges and culverts rendered necessary by the construction of water transportation facilities?

(6) Will the transfer of water from an area of comparatively low precipitation to one of considerably higher precipitation be advisable and will the supply and quantity always be available?

Be it further

Resolved, That the South Dakota Legislative Research Council is requested to study the subject of rights and obligations of the people of South Dakota associated with the beneficial consumptive use of the waters of the Missouri River Basin, to discuss fully such matters with the people of South Dakota and to prepare and submit draft of legislation for consideration at the 1959 session which draft shall set forth the relationships that will best forward the development and administration of the use of Missouri River Basin waters for the benefit of the people of South Dakota and that will provide fully for cooperation with the Federal Government in such development and administration of such waters for said purpose; be it further

Resolved, That the South Dakota Water Resources Commission is hereby requested to act on behalf of the people in South Dakota in cooperating with the Bureau of Reclamation in the investigations, studies, and plans for said Oahe unit and to report accomplishments thereon to the legislature not later than December 1, 1958, and to furnish all help possible to the legislative research council to the end that the best draft of legislation meet the needs of the people concerned in line with hearings and discussion before the 35th session of the South Dakota Legislature and to meet the requirements of the United States in this great undertaking; and be it further

Resolved, That copies of this resolution be forwarded to Interior and Insular Affairs Committees of the United States Senate and the United States House of Representatives and the Secretary of the Interior of the United States, to United States Senator Karl Mundt, to United States Senator Francis Case, to Congressman E. Y. Berry and to Congressman George McGovern with the respectful request that they, each and all, forward the request made herein.

DEVELOPMENT OF WATER RESOURCES

STATEMENT OF HON. GEORGE S. McGOVERN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF SOUTH DAKOTA

GENERAL STATEMENT

Governor Foss. Now, Mr. Chairman, I would like to introduce our Congressman from the First District, George S. McGovern.

Chairman HAYDEN. We will be very glad to hear Congressman McGovern at this time.

You may proceed, sir.

Mr. McGOVERN. Mr. Chairman, I as George McGovern, the Congressman from the First District of South Dakota.

I would like to thank the chairman and the committee for the opportunity to make a brief informal statement here today. I would like to request permission to file a formal statement later on.

Chairman HAYDEN. That may be done. We will be glad to hear you now.

(The statement referred to appears at the conclusion of Mr. McGovern's oral presentation.)

Mr. McGOVERN. I want to say, Mr. Chairman, that it is a privilege to join with our Governor and with Senator Mundt and with other members of the South Dakota delegation in working for the full development of water resources in South Daokta. I am not sure that we are quite ready to accept the designation made by Professor Webb in the current issue of Harper's, to the effect that we are part

of the great American desert, but, nevertheless, we do know that we have to fully develop what water resources we have.

I want to agree with the Governor that there is no one here today who will testify with the exception of our water resources engineer, Joe Grimes, who can lay any claim to being an irrigation or water expert. We have at least one very intelligent lady who is going to testify against the irrigation project. We respect her judgment as well as the judgment of those who are convinced that irrigation is feasible in South Dakota.

COMPLETION OF IRRIGATION STUDY

But the only think we seek at this time is the completion of this irrigation study toward the end of getting the facts that we need on which to base final conclusion.

I think the preliminary study which was asked for by this committee indicates, at least at this point, that there is a real probability that irrigation will be valuable to us in South Dakota. The studies that have been completed to date show a benefit-cost ratio that is not too bad even at this point. And, as the Governor said, that is figured in the most conservative manner possible in that it is based entirely on the irrigation benefits.

We need to complete this study to know the multiple-purpose benefits of irrigation, which will include improving our municipal and industrial water supply, improving our wildlife and recreational opportunities in the State, contributing to flood control, and contributing to the elimination of water pollution.

I think that on the grounds of economy it would be a serious mistake, after the expenditure of almost $5 million on this study and with the finish line almost in sight, to suddenly drop it now and leave the study incomplete.

So I add my word here today urging that the committee see fit to appropriate the funds that are necessary to continue and complete this study at the earliest possible time.

Thank you.

MISTAKES DUE TO LACK OF INFORMATION

Chairman HAYDEN. We have found in the years gone by that very serious mistakes were made because of lack of information.

Mr. MCGOVERN. Yes; that is certainly true.

Senator MUNDT. To any layman it may seem that spending $4 million or $5 million is a whale of a lot of money just for studying the feasibility of a project. But I might say that in the early days, before people became quite as meticulous as they are now in their advanced studies, that we always felt that irrigation practices were conducive to renewal of the the soil, they improve the condition of soil in the area.

It is quite important that we know what we are doing before we start doing it, also that we know what the cost is going to be.

As the opponents of this program point out perhaps, there may be full areas which are not feasible for irrigation. But I think we should know whether or not they are and mark them off and get them out of the program rather than run the danger that after a period of several

years of sustained drought and extreme conditions that might develop, that the time will come when we will say, "Let us go ahead and irrigate." We had better jolly well know where we should irrigate and where we should not irrigate, because you can ruin the countryside.

I think that, as a veteran in Congress, Mr. Chairman, you have seen that happen.

Chairman HAYDEN. That has happened in some places. In other places it developed that there was a hardpan below the surface so that the water would not penetrate. That type of area can be developed for irrigation.

On the other hand, you can find other places where there is practically no alkali content, and the possibility is that it may be washed out. Then there are other places where the water is so far down underground and it is difficult to pump it to the surface.

PREPARED STATEMENT

Mr. MCGOVERN. Mr. Chairman, my hometown, Mitchell, is not within the proposed irrigation area. But the secretary of our chamber of commerce, Mr. Hoyt Granter, was sufficiently interested in this project to come here to Washington and testify before the Appropriations Committee of the House on Tuesday, and he would have been here today had it not been for the press of business at home which made it necessary for him to return. But I have a statement of Mr. Granter to submit for the record, and I ask unanimous consent that it be inserted at this point.

Chairman HAYDEN. That will be done.

Mr. MCGOVERN. Thank you, Mr. Chairman.

(The statement referred to follows:)

My name is Hoyt J. Granter. I am a resident of Mitchell, S. Dak. My occupation is manager of the Mitchell Chamber of Commerce, a position I have occupied since October 1 of 1953.

In this capacity, I have had an opportunity to become familiar with the farmers and city people alike, and the problems that confront them from an economic standpoint.

During the past 20 years, I have had many occasions to view the "feast or famine" economy of our area. Mitchell's traditional economic role is that of a service center for a large surrounding farm area, including all of 14 counties and parts of 4 others. The fortunes of our community are closely tied to the economic conditions of our area, and to a great extent future industrial prospects are linked with agriculture, since ours is one of the premium farm markets in South Dakota.

The local rainfall pattern is important in determining the type of agriculture in the region. The southeastern portion of the State suffers less than the western and northern areas of the State from deficiencies in moisture. Hence, farm production and incomes tend to fluctuate less violently in this area than in more arid areas. Nevertheless, weather conditions—particularly rainfall—remain a critical factor in our agricultural operations.

Due chiefly to variations in rainfall, production of small grain and corn may vary as much as 50 percent from 1 year to the next. It is quite likely that irrigation might ultimately be the solution to this important economic problem. I might add that some of our progressive farmers already are doing experimental work in irrigation systems.

Mitchell is also interested in this investigation since the proposed program ultimately could result in an additional water supply for the city. Presently Mitchell's water supply is taken from Lake Mitchell, a small artificial lake located 1 mile from the city. Thus far we have been able to obtain sufficient quantities of water from the lake for use by our residents. However, if we were to become involved in an extremely long drought period, it is conceivable that this supply

could become very limited. We believe that the Oahe program could eventually result in our being able to secure water for this reservoir or lake if and when needed.

We recognize there are many problems involved in this proceeding. Certainly there may be some phases of the program that are distasteful to some. However, the good to be derived from the proposed program would be of benefit to the majority of our people.

We firmly believe that the survey should be made at this time. The results of this investigation could ultimately be valuable to the Nation as a whole. If the investigation is completed, the Bureau of Reclamation in a period of food shortages could increase the production in South Dakota almost immediately. Therefore, we urge that your committee grant authority for a continuation of the Oahe irrigation investigations at this time.

INTRODUCTION OF WITNESS

Senator MUNDT. Mr. Chairman, Mr. Harry Martin is our next witness. He is a farmer in Beadle County, S. Dak., and supervisor of the soil-conservation district of Beadle County. While Mr. Martin is not an expert on this subject, either, he comes close to being an expert, more so than some of us.

Chairman HAYDEN. We will be very glad to have you present your statement at this time, Mr. Martin.

SOIL CONSERVATION DISTRICT OF BEADLE COUNTY, S. DAK.

STATEMENT OF HARRY MARTIN, SUPERVISOR

GENERAL STATEMENT

Mr. MARTIN. My name is Harry Martin, Mr. Chairman. I operate a farm in Beadle County, a farm of 1,500 acres. So I will be speaking first as a farmer and next as a supervisor of the soil-conservation district of Beadle County, and also vice president of area 3. South Dakota is divided into 9 areas.

I know that we definitely, as farmers, would like to have an assurance of a fair crop of some feeds for our livestock. Also living in an area where we are doing a very limited amount of pump irrigation, we know that our water is very limited. However, we do hope that if and when this development has been completed, that maybe our aqueduct will be recharged by water farther up north.

NEW TERMS IN IRRIGATION

In our discussions we always come back to this. We hear so many new terms in irrigation, such as "acre limitation," "joint liability," "irrigation feed," "second feed," and many more, but we always come back to this: "Well, what does it cost me to get the water on my land?" Also I have visited different irrigation projects, and I am sure that irrigation is paying.

So we do know that, as far as I can see. But we do hear derogatory statements made about the Belle Fourche irrigation project in western South Dakota. We do know that mistakes have been made in the planning and the building of that project. The Bureau of Reclamation recognizes the mistakes made, but let us keep in mind that it was the second one built under the Reclamation Act of 1902, and changes are being made, and corrections are being made right along.

SUPPORT FOR COMPLETION OF STUDY

As a member and as vice president of the South Dakota Reclamation Association, our association has long emphasized the importance of all information possible, and that is why we urge at this time the completion of the study by the Bureau of Reclamation at the earliest possible date.

I am sure that we will accept the responsibilities that will be placed upon us.

We also appreciate the work that has been done and carried forward by your Appropriations Committee and by preparations made previously.

ANNUAL CONVENTION PROGRAM

I shall leave with you also some copies of our program for our 19th annual convention, which was held in Pierre, S. Dak., on January 16, 1957. I should like to leave them with your committee.

Chairman HAYDEN. Thank you for your statement.

Mr. MARTIN. Thank you very much.

STATEMENT OF EARL CROOK, REDFIELD, S. DAK.

GENERAL STATEMENT

Senator MUNDT. Mr. Chairman, our next witness is Mr. Earl Crook of Frankfort, S. Dak.

If we have an expert here it ought to be Mr. Crook because he has been irrigating his own farm since 1950, pumping out the water and spreading it around. He was a member of the State legislature and is a highly respected citizen of Spink County.

Chairman HAYDEN. The committee will be very pleased to hear you, sir.

Mr. CROOK. Mr. Chairman and members of the committee, I have a brief statement here which is based on my own experience in irrigation.

My name is Earl Crook. I am a farmer living 16 miles east of Redfield, S. Dak., where I have farmed for the past 37 years.

SPRINKLER TYPE IRRIGATION SYSTEM

Seven years ago I installed a sprinkler-type irrigation system and have been irrigating corn, alfalfa, and tame grass pasture, and a little wheat.

During this time I have found that, with our type of soil, the crops that we raise in that area respond to irrigation very well.

During the first 2 or 3 years after I started irrigating, many farmers visited my farm to inspect my irrigating setup and to ask about crop yields and so on. I am sure that at least 500 farmers visited my place during the first year or so. Most of them were interested in finding out whether or not it was practical and profitable to apply water to crops in this area.

Today, some years later, as I visit different parts of this proposed irrigation district, I meet and talk to many of these same farmers. A

few of them are now doing some irrigating on their own farms. Most of them are still interested in irrigating and are waiting to learn more about the development of the Oahe project.

IRRIGATION COSTS

The questions which I hear asked most often are two. The first question is: "How much will it cost to level my land in preparation for irrigation?" The second question is: "How much will the water cost me?"

The only answer that I can give them is that we will know the answer to these and other questions after the Bureau has completed their testing and mapping of this area.

We are down here today urging that your committee approve the appropriations to complete the necessary investigation work.

Mr. Chairman, I know what the irrigation will do on my farm, but my neighbors do not know what it will do when they have to get a different source of water supply than I have. I have a dammed-up stream and they will have to have their supply from the Missouri River. They do not know what the answers are. I am down there in their immediate vicinity.

So that, in order that my neighbors may know the answers, I am here to ask you to appropriate the money that is being requested.

SOURCE OF WATER SUPPLY

Chairman HAYDEN. Let me ask: What is your present source of water supply?

Mr. CROOK. We have what our State engineer calls a dry dalk, although we call it Turtle Creek. It runs part of the year, anyway. We have it dammed up. Originally there was a Government dam there, but it never held. It was not built by experts as is being done today. So I built one of my own, with the aid of the State soil conservation. They are doing mapping and surveying there, and that is holding the water.

I have about 100 acre-feet of water in the pond. During very hot, dry periods for 2 or 3 weeks, the water will go down 5 or 6 inches. There are some springs there, too. But during an ordinary day we can pump a half an inch of water in 24 hours and come right back up.

COST ANALYSIS

Senator MUNDT. Have you ever made a cost analysis of the cost of irrigation and the increased income you appear to get from your farm, as against the neighboring farms, with the same kind of crops?

Mr. CROOK. There is always the problem there of the kind of land and what was in the land the year before. Their particular fields might not compare with mine.

But I had made the study of it, Senator Mundt; that is, that it so happens that I have this irrigation pipe, I think it is 2,260 feet of irrigation pipe that we have, and we have tried to arrange the pumping stations. We have four of them. We have tried to arrange the pumping stations so that the water will reach as much of 240 acres as is possible. There are four different corners. There is a corner in every field except one, where this pipe does not reach. There is an

acre and a half or so of land in this corner. So, when we have a cornfield about to be harvested, all I have to do is to go out and pick 1 square rod of corn, pick the ears from 1 square rod in a place that was not irrigated, and then pick the corn from a place that was irrigated, and then I weigh it. That is very simple. It has always paid. There has been, I would say, an average of a 50-percent increase, and sometimes it was doubled. So I know what it will do for me. I never did put water on the land when it was not well repaid. For me, I would be in favor of the proposed irrigation district.

Senator MUNDT. Have you continued farming the same kind of crops?

Mr. CROOK. That is right.

ONE-CROP FARMERS

Senator MUNDT. One of the concerns of our people is that they do not want to become too much one-crop farmers; whether or not it pays out on wheat and alfalfa and oats and corn is the thing we want to find out, whether the answer is "Yes" or "No." I think you are right; I do not think our farmers want to change their methods of farming and become truck gradeners.

COMMUNICATIONS

Mr. CROOK. Mr. Chairman, in addition to the brief notes which I have just read here, I have a couple of letters. One is from the Spink County Pomona legislative committee, signed by the secretary of that committee, and the other is signed by Mr. Harold E. Harms, chairman of the Spink County Livestock Improvement Association. I would like to have those placed into the record, if I may.

Chairman HAYDEN. That will be done, Mr. Crook.

Mr. CROOK. Thank you very much, Mr. Chairman.

(The letters referred to follow:)

To Whom It May Concern:

Spink County Pomona Grange hereby recommends that there should be continued study on the Oahe unit dam irrigation project. We believe that this is a longtime project that will mean much to our county in increasing food production in the future. Also, South Dakota is known to have its dry-year cycles, and an irrigation project such as this could mean financial stability to the State. There has been a great amount of money spent on this project already, and, as landowners here, we certainly do not feel this research should be dropped and that money wasted on such a worthwhile project that can mean so much to us in the future who plan to make our homes here.

Prepared by Spink Count Pomona legislative committee; Otto Heer, Ray Johnson, Jim Holmes, Alvin Crook, Daryle Starr, and Ethel Heer.

Voted on and passed unanimously by members of Spink County Pomona Grange at a special meeting on May 8, 1957.

OTTO HEER, *Master.*
LAVONNE CROOK, *Secretary.*

HITCHCOCK, S. DAK., *May 9, 1957.*

Mr. EARL CROOK,
Frankfort, S. Dak.

DEAR SIR: It has come to my attention that you are soon to make a report in Washington in the interest of farmers in this area on irrigation.

I am chairman of the Spink County Livestock Improvement Association and a member of the Spink County Crop Improvement Association, and I believe that farmers are very much interested in irrigation.

We irrigate from a well and have found that crops respond favorably. We believe the problem of determining cost and advisability of irrigation should be carefully worked out. The Bureau of Reclamation has started this work, and it should have the necessary funds made available to complete this survey.

Yours truly,

HAROLD E. HARMS,
Chairman, Spink County Livestock Improvement Association.

ABERDEEN MILK PRODUCERS ASSOCIATION, BROWN COUNTY, S. DAK.

STATEMENT OF ALLEN SPERRY, TREASURER

GENERAL STATEMENT

Senator MUNDT. Mr. Chairman, our next witness is Mr. Allen Sperry, of Bath, S. Dak. He is a dairy farmer and is treasurer of the Aberdeen Milk Producers Association. He is a prominent farmer who is interested in this same problem.

Chairman HAYDEN. I am sure we will be glad to hear Mr. Sperry. You may proceed with your statement, sir.

Mr. SPERRY. Mr. Chairman and members of the committee, my name is Allen Sperry. I am a farmer living near Bath, Brown County, S. Dak. In partnership with my son, James, we operate a dairy and grain farm. We own 560 acres and rent 160.

I am also chairman of a committee of farmers organized for the purpose of promoting further investigation by the Bureau of Reclamation of the Oahe project.

Frankly, we farmers on this committee want more definite information about irrigation in our own area before we make the very important decisions that we will be called on to make. At the present time none of us can make intelligent decisions about the value of irrigation in our valley.

Our committee was organized after we were individually asked to sign petitions to your committee to refuse appropriations for the purpose of continuing the investigation and research by the Bureau of Reclamation as to the possibility of irrigation in our area. Reasons were given to us for signing that we could not accept.

I might insert here that these petitions were not circulated to us by Mrs. Cady, who will later present them to you. But these are some of the reasons that we are given for signing.

We were told that Missouri River water was not fit for irrigation. It would ruin our land. We were told that the Belle Fourche project in South Dakota was a failure.

We were told that irrigation projects usually break the first owners of land.

We were told that engineers have made so many errors that we should not depend on their judgment.

Such false and erroneous statements caused us to arrange for a meeting at Bath at which we had speakers from the Bureau of Reclamation and the Garrison Conservancy District in North Dakota. They answered all questions, and I have several letters which show that some people who had signed petitions changed their minds when they received correct information.

FUNDS FOR STUDY OF OAHE IRRIGATION PROJECT

The only way to have farmers informed so that they can make correct decisions on irrigation is to complete the study of the Oahe irrigation project by the Bureau of Reclamation.

The purpose that we farmers have in appearing before your committee today is to request necessary appropriations during fiscal year 1958 for the Bureau of Reclamation to proceed with this Oahe unit investigation.

COMMUNICATIONS

I would appreciate inclusion in the record of this hearing three letters which I have here.

I would like to add that one of those letters is from Mr. Robert A. Johnson who is a State senator in South Dakota and who also included with his letter a check to help defray some of the expenses of our committee.

Chairman HAYDEN. The letters you referred to may appear in the record at this point.

(The letters referred to follow:)

GROTON, S. DAK., *May 11, 1957.*

Mr. ALLEN SPERRY,
Bath, S. Dak.

DEAR MR. SPERRY: I am one of many family farmers who signed a petition requesting that no further appropriations be granted by Congress for the completion of the investigation and studies of the Oahe unit, Missouri River Basin project, by the Bureau of Reclamation.

At the time I signed the petition at my home, upon request by a close neighbor, I had no idea it might have such far-reaching implications.

I must confess I signed the petition before I had studied the issue, but after I attended the one meeting held this spring by the opponents of the study I am one farmer and I am sure there are others like myself who wants to be on record in support of completion of the investigation and study of the Oahe unit in South Dakota.

I wish to state that I am opposed, at this time, to the creation of an Oahe Conservancy District. I feel that before a conservancy district is developed Federal funds must be appropriated for the Bureau of Reclamation to complete its investigation and studies as to the feasible relationship for development of the Oahe unit for irrigation. I feel that before the district is established the Bureau must be able to inform the irrigators the estimated annual cost of water, what kind of contract will be offered to water users, who will finance the cost of bridge and culverts construction, and the availability of the supply and quantity of water.

At the present time my first and foremost concern is to have the Oahe unit completed as soon as possible so that we in South Dakota may have, for the first time, an abundance of hydroelectric power at a rate we can afford to pay. After this is done we must next consider using the water in the unit for human and domestic uses.

I am sure that there are other signers of these petitions who feel like I, that they are not opposed to further study of the feasibility of irrigation, but are opposed to the creation of a conservancy district at this time.

I am enclosing a contribution to help defray some of the expenses of your group.

Sincerely yours,

ROBERT A. JOHNSON.

BATH, S. DAK., *May 11, 1957.*

To Whom It May Concern:

I own and operate 300 acres in the Bath area and signed the petition against irrigation before I had the true information concerning irrigation. I think the investigation should be continued to find out if it is feasible for this land to be irrigated and then decide if we as owners want it or not.

Sincerely,

EVERETT HOFER.

BATH, S. DAK., *May 11, 1957*

To Whom It May Concern:

I own and operate 1,200 acres in the Bath vicinity and am very much in favor of more research for progress of irrigation in this area.

Opposition to this progress has resorted to the means of having my mother, Jesse Reed, sign a petition against such study, and she is now living in Aberdeen and does not own any land.

This seems to me to be unfair and unjust to those of us who strive to keep and maintain a greater future for our heritage.

Sincerely,

WILBUR K. REED.

DESIRE FOR FACTUAL INFORMATION

Senator MUNDT. I take it, Mr. Sperry, that you represent a committee of farmers, some of whom probably want to be irrigators, and some of whom do not want to be irrigators, but all want to get the facts so that they can make up their minds? Is that correct?

Mr. SPERRY. That is correct.

And since we did not have time, we attempted to approve only one thing, and that is that the farmers that have accepted petitions, that at least some of them would change their minds when they were given the correct facts.

Senator MUNDT. Thank you, Mr. Sperry.

Our next witness, Mr. Chairman, is Mr. Bernard Buisker, of Kidder, S. Dak. Mr. Buisker is a livestock farmer and is president of the county livestock association.

Chairman HAYDEN. We will be glad to have you proceed, sir.

MARSHALL COUNTY LIVESTOCK ASSOCIATION, KIDDER, S. DAK.

STATEMENT OF BERNARD BUISKER, PRESIDENT

NEED FOR STUDY ON IRRIGATION

Mr. BUISKER. Mr. Chairman, my name is Bernard Buisker. I am from Kidder, S. Dak.

I own land in White Township that is irrigable. I am a farmer representing farmers from Marshall County, which county will be affected by the irrigation projects.

I think this is a very important decision to you, to us, and also the the future generations. To me, it was so important that I left my farm to come to Washington and testify that when and if farmers really know the answer as to what it is going to cost them they will want irrigation.

I live just 4 miles from Sargent County in North Dakota, where this study that we are asking for has already been completed. When those farmers found out all the information, they signed up for irrigation 100 percent.

That study is what we are asking for here today. I am sure that when the farmers in South Dakota, who are now not sure whether they want irrigation or not, will find out all the facts, that they will want it.

Thank you.

Senator MUNDT. I presume that Sargent County is just getting underway with the program, that they do not have any experience tables on irrigation that can help you. Is that correct?

Mr. BUISKER. They have just this study completed to that point where they know what the answers are and what it is going to cost them, and such things as class 1 and all that.

Senator MUNDT. Thank you very much.

Mr. BUISKER. You are welcome.

Chairman HAYDEN. Thank you, sir. And we will place into the record at this point your complete prepared statement.

(The statement referred to follows:)

Honorable gentlemen, my name is Bernard Buisker from Kidder, S. Dak. I own land in White Township that is irrigable. I am a farmer representing farmers from Marshall County that will be affected by the irrigation project of the Garrison and Oahe projects.

The possibilities that will come to us and to our neighbors throughout the James River section of our State interests us. We find ourselves in an area that may receive irrigation waters from both the proposed Oahe project in South Dakota and the proposed Garrison diversion project, mostly in North Dakota, but a sizable piece of which is in South Dakota, called the Oakes unit.

A few years ago, the Bureau of Reclamation told us about the Garrison diversion project generally and said that they must do more work before they could tell us how much we might have to pay each year for irrigation water. I believe that this will be answered soon. We find now that other areas in our county would make good irrigated land with water from the Oahe unit. We are happy about this fact, but we would like to know how much it will cost us for this water. We find it necessary to again ask the Bureau of Reclamation to continue this study so that they can give us whatever business proposition and contract with which we will have an opportunity to make an agreement to get this irrigation water if the project is economically sound.

The Oahe project and the Garrison diversion project are tied together with the drain in the central portion of the county. There are at least two areas in the county that are under consideration of the small watershed development. One of these lies on the headwaters of the rice and the other in a portion of the James. There is a certainty that they would tie in with any plans for irrigation. It is important that the study on the Oahe project be completed before too much advancement be made in watershed study.

We do not think that the job has been done until the Bureau of Reclamation does this. We ask that your committee supply the money necessary for finishing the studies on the Oahe project in South Dakota and the Garrison diversion project in North Dakota.

Gentlemen, this is a very important decision to you, to us, and to the future generation.

To me it is so important that I stopped my tractor and left the farm for my wife and my 12-year-old boy to take care of, to come here and testify that when and if they know what irrigation costs and what it means to the good of the community, they will want irrigation.

I live 4 miles from Sargent County, N. Dak., where this study for which we are asking has been completed.

When these farmers found out all the information they needed as to cost, they signed up 100 percent for irrigation. To verify this statement, contact the conservancy district chairman of Sargent County, N. Dak.

I'm sure that when the Oahe unit study is completed, farmers in South Dakota who now are not sure will want irrigation.

Chairman HAYDEN. Who is your next witness, Senator Mundt?

Senator MUNDT. Mr. Donald D. Willits, of Ashton, S. Dak.

Mr. Willits is an experienced irrigator, as is Mr. Crook. Mr. Willits is president of the Spink County Irrigation Committee and is a member of the Crop Improvement Association.

Chairman HAYDEN. We will be happy to have you proceed with your statement, sir.

STATEMENT OF DONALD D. WILLITS, PRESIDENT, SPINK COUNTY IRRIGATION COMMITTEE, ASHTON, S. DAK.

Mr. WILLITS. Mr. Chairman and Senator Mundt, I am Donald D. Willits, of Ashton, Spink County, S. Dak. My wife and I own, operate, and live on 640 acres of land located 9 miles north of Redfield, S. Dak., which is the county seat of Spink County. In addition, we rent 320 acres in the same neighborhood.

I have a prepared statement, with attachments, a resolution by the Redfield Chamber of Commerce and a resolution by the Spink County Farmers Union, which I would like to have included in the records of your committee.

Chairman HAYDEN. They will go into the record at the conclusion of your remarks here, sir.

(The documents referred to appear at the conclusion of Mr. Willits' oral statement.)

Mr. WILLITS. Thank you, Mr. Chairman.

We have been residents of South Dakota for the past 5 years, having moved from the Platte River Valley of Nebraska southwest of the city of Columbus, where I irrigated for 4 seasons under private well and pump on a rented farm.

I would like to add that some people who might oppose this or might be unfriendly to this issue might want to know why we left irrigated land in one State to go to another State where there is dry-land farming.

REASON FOR MOVE TO SOUTH DAKOTA

Senator MUNDT. I think there might be a lot of reasons why you would want to move from Nebraska to South Dakota.

Mr. WILLITS. It so happened that I was born and raised in Polk County where I had this irrigating experiene. But the farm that I was on for 8 years was not for sale and it did not look like it would ever be for sale. On top of that, due to its irrigation possibilities after I helped develop it, and also the land around it, it could not be bought for less than $250 to $300 an acre. I did not have that kind of money to make a downpayment, so I thought I had good prospects in South Dakota. I am happy to be there, but I would like to irrigate in South Dakota.

BENEFITS OF IRRIGATION

I know from my own experience the benefits of irrigation to the individual farmer and to the community. Therefore, I wish further investigation in my present community, the James River Valley, and other lands considered under the Oahe unit to determine the

costs, benefits, and feasibility of irrigation to my lands and those of my neighbors.

In addition to my own interests and those of my immediate neighbors, I represent the Chamber of Commerce of the City of Redfield, S. Dak., and the Farmers' Union of Spink County. Both organizations have sent resolutions asking funds for further studies by the Bureau of Reclamation in the James River Valley project under the Oahe unit.

Thank you.

Chairman HAYDEN. How wide is the valley where you live, sir?

Mr. WILLITS. Where I live I think it is about 30 miles wide.

Chairman HAYDEN. Is it comparatively level land?

Mr. WILLITS. Yes.

Now, I cannot verify this entirely, but I am told that it is the second largest spot of level land in the northern continent. The only other one that is bigger and flatter and wider is in Canada.

I might be mistaken on that, but you know we all say we have the best place in the world to live.

NEED FOR LEVELING

Chairman HAYDEN. You will find, of course, that even though the land is level when the time comes to irrigate you will still have to do more leveling.

Mr. WILLITS. Yes; I understand that. I know that from my own experience.

Chairman HAYDEN. That is really the greatest benefit that the Soil Conservation Service has been to my people in Arizona. They go to a man's farm and fix it right. If it is once fixed right, it is fixed for all time and does not have to be done over again.

Mr. WILLITS. They definitely should do that.

Chairman HAYDEN. And they have learned how to do that.

Mr. WILLITS. Yes.

Thank you, Mr. Chairman.

Chairman HAYDEN. Thank you, sir. The two resolutions that you have submitted to be included in the record will appear in the record at this point.

Mr. WILLITS. Thank you.

(The documents referred to follow:)

RESOLUTION

Whereas Spink County lies in the heart of the proposed Oahe unit, Missouri River Basin project area; and

Whereas limited well irrigation has been carried out in this area with considerable success; and

Whereas farmers as well as businessmen in the area are enthusiastic over the prospects of full-scale irrigation through development of the Oahe irrigation project: Now, therefore, be it

Resolved, That we, the Spink County Farmers' Union, representing 700 farm families, go on record endorsing continued Federal appropriations to complete the investigations of the Oahe unit, Missouri River Basin project.

SINK COUNTY FARMERS' UNION.

(Signed) CHARLES MARLETTE, *President.*

(Signed) DOROTHY RADCLIFFE, *Secretary.*

Be it hereby resolved, That the Redfield Chamber of Commerce of Redfield, Spink County, S. Dak., request the Congress of the United States to provide the necessary funds for the further study and development of the South Dakota river development, irrigation, and flood-control program in that such program is vital and necessary to the farm and urban economy of this area; that the land therein consists of fertile farmlands in a semiarid area, and there is a need for irrigation to assist crops due to the limited rainfall; that irrigation will tend to eliminate the risk of the farmer in investing in seed for crops and will tend to give him a guaranteed crop; that Turtle Creek, a tributary to the James River, floods a part of the city of Redfield, and such a condition could be eliminated by further study; that such development will tend to increase the population of this area and will bring industry to South Dakota from already overcrowded and congested areas, and such disbursement of population and industry is vital to our national defense; that it will create additional sources of water supply for the city of Redfield and surrounding towns and villages and allow recharging of the already overburdened water sources and will allow conservation of such water sources; that it will be a safeguard to water pollution and also provide a source of recreation.

That such a project is too large for any private individual, city, county, or State to undertake as such costs would be prohibitive, and it is necessary that the Federal Government make the necessary study and development or such work will not be done, and the present study and development will be of no avail and completely wasted, and rural communities will continue to disintegrate and be of no benefit to our country or tend to reduce their effectiveness to the American way of life.

Dated this 10th day of May 1957.

REDFIELD CHAMBER OF COMMERCE,
By LYNN DORSEY, *President*.

Attest:
[SEAL]
RICHARD A. BRYSON, *Secretary*.

Senator MUNDT. Thank you, Mr. Willits.

Now, Mr. Chairman, we have Mr. Harold Currier of Wilmot, S. Dak.

Mr. Currier is a farmer from Sully County over near the Missouri River Valley.

Chairman HAYDEN. You may proceed with your statement, sir.

STATEMENT OF HAROLD CURRIER, SULLY COUNTY, S. DAK.

Mr. CURRIER. Mr. Chairman and members of the committee, my name is Harold Currier. I am a farmer in Sully County, which is near Onida, S. Dak. I operate 1,120 acres in a combination livestock and grain farm.

I own 480 acres within the proposed Missouri slope irrigation area. This area is a part of the Oahe irrigation project that will divert water from the Oahe Reservoir, which is close to us.

PLIGHT OF FARMERS IN AREA

I am here to represent the farmers and the people of my community. Most of us run a combination farm-ranch operation. We grow corn, small grain, and livestock. We grow farm crops for stock feed which we combine with native hay. When a dry year hits us we have small production of crops and hay.

Everybody is in the same condition. Feed is not for sale at prices we can afford, and unless we have saved a supply we are forced to sell our young livestock. If more than 1 dry year hits us, we may have to sell our breeding stock and then spend about 5 years getting back into business.

FARM-RANCH OPERATORS WANT IRRIGATION PROJECTS

We farm-ranch operators would like to irrigate a feed base or have a short winter feed at reasonable prices in addition to the hay. We would like to use our grazing land for grazing and not have to cut a large part of it for hay. We could stabilize our production. We could produce better livestock. We could get better prices. All of us have a lot to learn about irrigation. We have to have some information on cost of irrigation water and other businesses and contract conditions that is not available to us at present.

From all evidence in our area, we want irrigation projects, provided they can be brought to us at a price we can afford.

We will be willing, I am sure, to do our part when the time comes, if costs are in line and the Bureau of Reclamation can tell us about some of the details which they tell us cannot be done now.

We earnestly request that investigation funds to furnish the Bureau of Reclamation study be made available to them.

I thank you.

WATER VITAL AT PROPER TIME

Chairman HAYDEN. It has been your experience, has it not, that a crop wants water when it wants it and it has to have it right then?

Mr. CURRIER. Yes.

Chairman HAYDEN. If the rains do not come, you simply do not get the production, is that not correct?

Mr. CURRIER. That is right. Last year was one of them.

Senator MUNDT. When you need the rain you need it bad.

Mr. CURRIER. Yes; we need it bad then.

Senator MUNDT. Thank you, Mr. Currier.

Mr. Chairman, our next witness is Mr. James E. Baxter, who also comes from Sully County. He is a businessman and farmer in the neighborhood of Mr. Currier's farm.

I might say, Mr. Chairman, that I happen to have a farm in Sully County myself, so I am particularly interested in what Mr. Baxter will have to say.

Chairman HAYDEN. Very well. We will be pleased to hear Mr. Baxter.

You may proceed, sir.

STATEMENT OF JAMES E. BAXTER, FERTILIZER DEALER, ONIDA, S. DAK.

Mr. BAXTER. My name is James E. Baxter. I live in the county seat of Sully County, Onida, S. Dak. I am a fertilizer dealer. I also operate 1,760 acres as a grain-producing farm. I own 480 acres just outside the boundary line of the proposed Missouri slope irrigation area. I rent 1,280 acres within the area.

This area is near a part of the Oahe irrigation projcet that will divert water from the Oahe Reservoir which is close to us. I am here to represent the farmers and the people of my area.

SITUATION IN OAHE AREA

Sully County has approximately 81,000 acres of irrigable land which is a combination farm-ranch area. Our annual precipitation is about 16 to 18 inches per year which is not sufficient to stabilize our economy. When a dry year hits us we have a small production and in some seasons, such as 1956, practically no production at all. If more than one dry year hits us in succession we are in dire circumstances. Our farmers and ranchers would like to irrigate for a feed supply if irrigation can be provided at a cost they can afford.

RESULTS OF IRRIGATION IN AREA

We feel that irrigation in our area would produce the following four things: First, it would stabilize our production; secondly, it would stabilize our economy.

On the stabilization of our economy I would like to make one brief statement.

Stabilizing the economy of our farmland here, due to the bad conditions of the weather and lack of rain, there seems to be a lack of financing due to the fact that a man cannot depend on the normal production usually. In many cases, you know, when a man tries to start farming, he finds that he has no place to get such help to finance those projects at the time.

The third result that we feel irrigation in our area would produce is a better quality of feed and livestock.

We also feel that irrigation in our area would give us a choice of crops to grow.

The Oahe Reservoir lays adjacent to the irrigable land in our area, and will inundate many acres of our soil. This water can be invaluable if we can afford to irrigate. In our opinion, only the Federal Government, through the Bureau of Reclamation, can provide the proper information to us.

We sincerely and earnestly request that investigation funds to finish the Bureau of Reclamation studies be made available to them, so that they can provide the information so vital to us.

ENDORSEMENT OF FARMERS

Mr. Chairman, I have an endorsed statement by several farmers, which I have attached to the statement I just read. It is a personal endorsement in that area. This endorsement represents something like 59,000 acres involved in this project. With your permission, I would like to submit it for the record.

Chairman HAYDEN. It may go into the record at this point.

(The document referred to follows:)

We the undersigned landowners in the proposed Missouri slope irrigation project, namely Sully County, S. Dak., do hereby endorse our representatives Harold Currier and James E. Baxter and their statements.

Name	Address	Acres owned	Date
Harold L. Sloan	Onida, S. Dak	960	May 6, 1957
L. Ray Cass	Agar, S. Dak	640	Do.
Jim Matzen	Onida, S. Dak	560	May 7, 1957
Art Wittler	Agar, S. Dak	1,600	Do.
John W. Day	Onida, S. Dak	960	Do.
Gordon Day	do	640	Do.
Glenn D. Hughes	do	1,280	Do.
Chester E. Neiman	do	1,440	Do.
K. G. Marsh	Agar, S. Dak	320	Do.
O. C. Hortman	Onida, S. Dak	640	Do.
Wm. E. Ruckle	do	640	May 8, 1957
John E. Sutton	Agar, S. Dak	10,000	May 9, 1957
Raymond Sutton	do	10,000	Do.
James W. Sutton	Onida, S. Dak	10,000	Do.
Gilbert T. Smith	Pierre, S. Dak	1,440	May 11, 1957
Maynard P. Green	do	480	Do.
Charles Dant	Onida, S. Dak	640	Do.
Andrew Mikkelsen	Agar, S. Dak	1,600	Do.
Vernon E. Garrett	Pierre, S. Dak	4,000	Do.
Thenor McKenney	Onida, S. Dak	800	May 4, 1957
Robert B. Nikkelson	do	480	Do.
Axel T. Nikkelson	do	960	Do.
C. Elezer Byrum	do	680	Do.
Albin H. Olson	do	400	Do.
James E. Brooking	do	1,160	Do.
Carl E. Kinder	do	400	Do.
W. W. Coates	do	320	May 11, 1957
Albert O. Lomheim	do	1,600	May 8, 1957
Hazel Lomheim	do	160	Do.
Maurice McGreen	Pierre, part A	1,920	May 10, 1957
Howard H. Underhill	Agar	320	Do.
Phillip A. Connor	Onida	2,080	May 11, 1957

RAINFALL IN AREA

Chairman HAYDEN. You state you have an average of about 16 inches of rainfall a year, is that correct?

Mr. BAXTER. Yes, sir.

Chairman HAYDEN. When you get 16 inches of rain, you do pretty well, do you not?

Mr. BAXTER. Sometimes, Mr. Chairman, we do, providing we can get it at the proper time. But that is not true in all cases, even when we get the 18 or 19 inches.

Chairman HAYDEN. On the other hand, if you could be assured of, say, 24 inches, if you knew you could count on 2 acre-feet of water, would it make a lot of difference to you?

Mr. BAXTER. It certainly would.

One of the reasons for that is the fact that we would have the water at the strategic time.

Chairman HAYDEN. Of course, that is the point in the whole thing, that you would have the water at the time you want it.

Mr. BAXTER. Yes, sir.

IRRIGATION IN MIDSEASON NEEDED

Senator MUNDT. That, to me, always seems to be the great advantage in having irrigation of this type. It is a matter of timing. I live in Lake County, where we have an adequate rainfall as far as the districts are concerned, but if we do not get that nice rain in July that we need for corn, plenty of rainfall at some other time would not be of too much help.

Chairman HAYDEN. We find that to be true in my State. I know some people that have the right kind of land and they irrigate before they plant and then they do not irrigate again until the wheat is, say, in the middle. They just finish it out to get a wonderful crop. They do it sometimes with two irrigations a year.

Senator YOUNG. Yes. Timing is an important factor.

Chairman HAYDEN. They just hit it right, they do everything at the right time and everything comes out all right.

Senator YOUNG. I might say, Mr. Chairman, that you have had more experience with irrigation than anyone in the Senate.

Senator MUNDT. I guess the chairman has been in on every irrigation act that has been passed since he has been in Congress. Is that right, Mr. Chairman?

Chairman HAYDEN. Not quite.

Senator MUNDT. Thank you for your testimony, Mr. Baxter.

Mr. BAXTER. Thank you, Senator.

Senator MUNDT. Mr. Chairman, our next witness is Mr. James H. Ruddy, of Huron, S. Dak., who is a businessman and represents the Huron Chamber of Commerce.

I might say here that Huron is a focal point and has been promoting the idea of irrigation.

Chairman HAYDEN. You may proceed with your statement, sir.

STATEMENT OF JAMES H. RUDDY, REPRESENTING THE CHAMBER OF COMMERCE OF HURON, S. DAK., AND THE JAMES RIVER VALLEY DEVELOPMENT ASSOCIATION OF NORTH AND SOUTH DAKOTA

Mr. RUDDY. Mr. Chairman and members of the committee, I have a prepared statement here and several atached resolutions from farm organizations in Beadle County.

As Senator Mundt has said, I represent the Chamber of Commerce of Huron, and, additionally, I represent the James River Valley Development Association.

Chairman HAYDEN. Your entire statement, along with the resolutions attached thereto, will be included in the record.

Mr. RUDDY. Thank you.

(The documents referred to appear at the conclusion of Mr. Ruddy's oral statement.)

URBAN AND RURAL AREAS ENDORSE STUDY

Mr. RUDDY. I just want to make some remarks and say that with these attached resolutions from the farm organizations, that I feel I am not only speaking for urban areas but also the rural areas in my county.

Among the resolutions I have attached to my statement, is a resolution from the city commission endorsing the further study from the standpoint of the municipal water supply and the budget.

Senator YOUNG. Do you have the support of all of the farm organizations?

Mr. RUDDY. We have the support of the Beadle County farm bureau, the Beadle County farmers union, the South Dakota farmers union,

the Beadle County livestock improvement association, the Beadle County crop improvement association, the Beadle County grange organizations.

That is about all. I probably should not say that is all of them, but that comprises the main ones, I would say, that returned resolutions.

Since the flood control act of 1944 was passed, we people of Beadle County have been basing our hopes for a stabilized economy and economic prosperity and development in irrigation in the James River Valley.

IRRIGATION PROMISED IN DEVELOPMENT

We have been consistently told, that this irrigation was to be one of the prime considerations in the development of the basin. And, of course, we had proceeded on that assumption that when the proper time came, that we would be given the opportunity to irrigate if it was feasible.

I do not like to take up a lot of time since I am not expert enough to try to tell what the benefits of irrigation are, but we assumed that they would be the same benefits that are enjoyed by other irrigated areas in the United States today, and the prosperity that seems to go with it.

REPORT FROM BUREAU AWAITED

We have watched the Oahe Dam, for example, and have always fought for its development before these committees. At the same time, the Bureau of Reclamation has been making studies in the area.

We had hoped that by the time the dam was filled, that the Bureau would give us a favorable report that it is possible to irrigate in our valley. Of course, we were told that there was nothing for sure, and we always felt it would be a big disappointment if their report did come out to be unfavorable. But that would be something over which we would have no control.

But certainly we never felt we would have to be disappointed, not because of an unfavorable report but because of the fact that these studies were not going to be continued. That could be the biggest disappointment of all, to be sitting there and wondering what would have been the answer.

So that is why we feel that the report should be continued, that the people in the area are entitled to the answer.

PEOPLE ENTITLED TO ANSWER FROM BUREAU

We also think the people of the United States are entitled to the answer—to know what our potential production is in the James River Basin.

Senator YOUNG. I might say, sir, that I have a farm farther north on the James River.

Mr. RUDDY. Is that right?

Senator YOUNG. There is a great deal of interest in irrigation in the valley that far north, too.

Mr. RUDDY. I think the interest is definitely there. That's why it was pointed out that this is not a chamber of commerce promotion, but the people are backing it.

I do not say that the backing is 100 percent, because there never is a hundred percent of anything. If there was such a thing as a hundred percent we would not have this room that we are sitting in today, because I'm sure somebody was against it.

EFFECTS OF FAILURE TO COMPLETE STUDY

Senator MUNDT. If they did not complete it, we would be in the position of having spent some $4 million in trying to solve the puzzle without ever arriving at the answer. That would mean that the $4 million would have been squandered.

Mr. RUDDY. That is the way we feel.

In other words, we do not know any more now except that the interim report of the last year showed that it is feasible to continue the feasibility study. That is about what it amounts to.

Senator MUNDT. The interim report left a lot of questions unanswered.

Mr. RUDDY. And it was very vague. Actually, all it did, I think, was to outline the area that they feel could be irrigated.

FAILURE TO IRRIGATE MAY MEAN DROUGHT DISASTER

In this case we are down here, we think, on a legitimate basis to give us an opportunity to solve our own problems of irrigation. Someday certainly, if they do not get it sooner or later, we are going to have to be down here sitting again asking for several million dollars in drought disaster relief, over which we have no control. We would much rather go at it from this angle to take care of ourselves; from a productive angle, in other words.

That is about all I have to say in support of my remarks. I certainly earnestly and sincerely request that you give this your favorable consideration.

Chairman HAYDEN. Thank you, sir.

Senator MUNDT. Thank you very much, indeed.

Chairman HAYDEN. As I stated previously, Mr. Ruddy, your complete statement and the attachments to it will appear in the record at this point.

Mr. RUDDY. Thank you, Mr. Chairman.

(The documents referred to follow:)

Mr. Chairman and members of the committee, for the record, my name is James H. Ruddy from Huron, S. Dak. I represent the Huron Chamber of Commerce and the James River Valley Development Association of North and South Dakota. This association organized in 1954, is made up residents of the James River Basin in North and South Dakota, supported by voluntary contributions and was organized for the purpose of promoting the development, conservation, management, and beneficial use of waters of the James River Basin in North and South Dakota for domestic, stock water, municipal, and rural rupplies, irrigation, recreation, fish and wildlife propagation, industrial and other purposes, in such manner as to provide the greatest good to the greatest number of people in the basin.

Ever since work started on the Missouri River development, the people of Huron and surrounding area have actively supported the planning and construction of the Missouri River structures. Our work has been primarily in the area of the dams and with the Federal agencies concerned. Occasionally, we have appeared before this committee to request your continuing support for this great work in our region.

We have two main reasons for doing all that we can do to help complete the big works on the Missouri River. First, in our dry area, storage of the Missouri River waters is necessary before it can be made available for use. Second, we have no desire to experience a return of drought years conditions of the "dirty thirties" and the only way we see to do that is to stabilize crop production and water supplies in our State by irrigating as large an area as is possible. We fully realize that seasonal droughts are not abnormal, in fact, they are a very normal part of our climate.

Continued community prosperity is a function of stabilized buying power. As long as a rural community such as Huron experiences "feast or famine" with the vagaries of the rainfall pattern, there can be no community prosperity. The biggest part of this irrigation objective is in the picture with water from the main stem reservoirs. We have always realized the early adverse results of the mainstem developments to South Dakota in the forms of large flooding of areas along the river, disruption of many stockmen's operations who use these timbered and meadow lands as winter range, the relocation of farmers, removing property from local and State tax roles and other effects. We have realized that principal early benefits would accrue first to people and areas far downstream who would have most of their good from the Missouri Basin development before the principal benefits would come to our area. However, all parts of the Missouri River development are one big job as we see it, irrespective of when benefits will come to specific areas. The potential benefits from irrigation in South Dakota is a possible solution to a large part of our basic economic problems, that of a very fluctuating agricultural production of farm crops and livestock which in turn is the heart of our economy. We must do everything possible to provide security in this high risk business.

We sincerely and urgently request this committee to consider favorably the provision of sufficient funds to enable the Bureau of Reclamation to complete the investigation studies of the Oahe unit, and we give the following reasons why we think this matter is of such great importance to our area and the whole State of South Dakota:

1. The stabilization of the flow of the James River which would come with the development of the Oahe unit would be the answer to the water supply problem for many cities in eastern South Dakota. This stabilization would also provide flood control on the James River and solve the pollution problem.

2. If the Oahe unit is developed and brings water and irrigation to eastern South Dakota it will enable industry to come to our area and help stabilize our economy. It will enable the farmer to diversify his production away from crops that are in surplus and produce the food and fiber that our Nation needs. Our present dry-land farming is adapted mainly to crops that are now in surplus. Development of irrigation in the Oahe project will take many years to realize. Present crop surpluses are not an issue in the development in this project because of the long time it would take to develop irrigation in our area.

3. Completion of the project would provide an opportunity for nearly 3,500 new farms in the area. This would provide us with the means of increasing both our rural and urban population.

A report to the Senate of the United States by the Secretary of the Interior in April of 1944 stated, "The proposed Oahe Reservoir will serve many purposes, the principal of which are the irrigation of a large tract of land in the James River Basin." This was the statement that has given the South Dakota citizen encouragement and hope that when the Oahe Dam was completed we would have the opportunity to utilize some of the impounded water for the beneficial use of all of the people of our State. If we have seemed complacent about this development it has only been because we were led to believe that if we were patient there was no question but what the development of the Oahe unit was just a question of time. Little did we realize that the time would come when we would have to assert ourselves in an all-out effort to secure and protect the water rights to our rightful share of the Missouri River water.

Right now we believe that the Bureau of Reclamation should complete their investigations of the Oahe project so that the farmers and others will know how much water will cost and what benefits they may expect.

In view of these facts we appeal to this committee to grant the necessary funds so that the people of South Dakota may be given the same opportunities to improve our economic situation through the development of irrigation as other underdeveloped areas.

The statements and opinions above made are in complete accord with the overwhelming majority of the people of South Dakota, which is evidenced by the attached resolutions from the following organizations and individuals. With your permission, I would like to request that these attached resolutions and statements be made a part of the record:

1. Beadle County Farm Bureau
2. Beadle County Farmers Union
3. South Dakota Farmers Union
4. Beadle County Livestock Improvement Association
5. Beadle County Crop Improvement Association
6. Beadle County Grange Organizations
7. Huron City Commission
8. Chandler L. Beach

RESOLUTION

Whereas years of planning are necessary to secure needed information and to draw up the necessary working plans for irrigation projects and whereas only the preliminary planning for the Oahe project has been completed, and whereas, because of variable and often deficient rainfall in this area, irrigation is needed, therefore, we, the Beadle County Farm Bureau, urge the continuation and completion of the planning and the beginning of the construction work on the feasible portions of the Oahe project as soon as possible.

Dated this 6th day of February 1957.

(Signed) WARD RADCLIFFE,
President, Beadle County Farm Bureau, Wessington, S. Dak.

RESOLUTION

Whereas the South Dakota Farmers Union, with a membership of 20,000 farm families, firmly believes that water is one of the most essential resources in South Dakota agriculture, and historically the South Dakota Farmers Union has always fought for full utilization of the water resources of our State for the protection and benefits that can be derived therefrom; and

Whereas full utilization of water resources will greatly add to the economic security, to the health of our people, and promote prosperity and the general welfare of all of our people; and

Whereas the Flood Control Act of 1944 provided for irrigation of upward of 1 million acres in Missouri, James, Grand, Cheyenne, Moreau, Bad, and White River Basins of our State; and

Whereas the Bureau of Reclamation's interim study report of 1956 for the James River division, which is part of the Missouri River Basin project, proved that the completion of studies on the project were needed and warranted; and

Whereas now is the time to complete the study and survey of the feasibility of irrigation in South Dakota so that we will be ready to meet the demands of the increased population and increased need for food and fiber which United States Government surveys indicate: Therefore be it

Resolved, That the South Dakota Farmers Union appeals to the Appropriations Committees of the 85th Congress of the United States to grant adequate funds needed by the Bureau of Reclamation to complete the study and survey of the Oahe irrigation unit of the Missouri Basin project.

PAUL W. OPSAHL,
President, South Dakota Farmers Union.

Dated at Huron, S. Dak., May 11, 1957.

RESOLUTION

Whereas this farm organization, the Beadle County Farmers Union, sincerely believes that water is the lifeblood of South Dakota agriculture, one of our objectives is the complete development and utilization of the water resources of the State of South Dakota and the protection and preservation of the benefits which can be derived therefrom; and

Whereas such development and utilization of these water resources will do much toward adding to the economic security, protection of health, property,

and enterprise, and the promotion of the prosperity and general welfare of all of the people of the State of South Dakota; and

Whereas the Flood Control Act of 1944 provided for irrigation of 972,510 acres of land in the Missouri, James, Grand, Cheyenne, Mureau, Bad, and White River Basins of South Dakota; and

Whereas the Bureau of Reclamation's interim information report of 1956 for the James division, South Dakota Missouri River Basin project, proves that completion studies on the project are warranted: Now, therefore, be it

Resolved by the Beadle County Farmers Union, That we appeal to the Appropriations Committees of the Congress of the United States to grant the necessary funds needed by the Bureau of Reclamation to complete the feasibility study of the Oahe irrigation unit of the Missouri River Basin project, for the following reasons:

1. Beadle County adjoins project as now proposed. That is a definite asset to us, even if this county did not get any irrigation, because available feed crops in below-normal years would permit farmers to purchase feed locally and maintain their livestock herds.

2. Even though the 1956 interim information report did not include for irrigation in Beadle County, there is a definite interest in irrigation which is demonstrated by the increase in well irrigation. The diversion of water from the Missouri River to the James River Valley would help to replenish the aquifer for this pump well irrigation. In addition to this we still have hopes of developing small tracts of irrigation along the Beadle Canal and the James River.

3. Flood control on the James River will be of definite value to Huron and all of Beadle County.

4. Irrigation in South Dakota will bring with it diversification of farm production and will enable the farmers to divert from surplus crops to those not in surplus. This is becoming more important to us every day due to the declining form income on surplus crops. Without irrigation, our only choice is to say with the dry-farming crops, which are those that are in surplus. Certainly, without the opportunity to diversify and with the farm problem what it is today, the South Dakota farmers' future does not look too bright.

6. The Bureau of Reclamation has spent considerable time and money to give us a half answer on the feasibility of this project—without the completion of the study we never will know the answer. Certainly we feel that we farmers are entitled to a completed study report so that we can intelligently decide whether or not we believe the project is good or bad for us. Farmers in other irrigable areas of the world have been given this opportunity; why not us?

Adopted by the Beadle County Farmers Union this 9th day of May 1957.

ROBERT L. BROER, *President.*
ORVILLE TOLLEFSON, *Secretary.*

RESOLUTION

Whereas this farm organization sincerely believes that water is the lifeblood of South Dakota agriculture, one of our objectives is the complete development and utilization of the water resources of the State of South Dakota and the protection and preservation of the benefits which can be derived therefrom; and

Whereas such development and utilization of these water resources will do much toward adding to the economic security, protection of health, property, and enterprise, and the promotion of the prosperity and general welfare of all of the people of the State of Southe Dakota; and

Whereas the Flood Control Act of 1944 provided for irrigation of 972,510 acres of land in the Missouri, James, Grand, Cheyenne, Moreau, Bad, and White River Basins of South Dakota; and

Whereas the Bureau of Reclamation's Interim Information Report of 1956 for the James Division—South Dakota Missouri River Basin project proves that completion studies on the project are warranted: Now, therefore, be it

Resolved by the Beadle County Livestock Improvement Association, That we appeal to the Appropriations Committee of the Congress of the United States to grant the necessary funds needed by the Bureau of Reclamation to complete the feasibility study of the Oahe irrigation unit of the Missouri River Basin project, for the following reasons:

1. Even though the 1956 iterim information report did not include for irrigation, Beadle County, there is a definite interest in irrigation which is demonstrated by the increase in well irrigation. The diversion of water from the Missouri River to the James River Valley would help to replenish the aquifer for this pump-well irrigation along the Beadle Canal and the James River.

2. Beadle County adjoins projects as now proposed. This is a definite asset to us, even if this county did not get any irrigation, because available feed crops in below-normal years would permit farmers to purchase feed locally and maintain their livestock herds.

3. Flood control on the James River will be of definite value to Huron and all of Beadle County.

4. Irrigation in South Dakota will bring with it diversification of farm production and will enable the farmers to divert from surplus crops to those not in surplus. This is becoming more important to us every day due to the declining farm income on surplus crops. Without irrigation, our only choice is to stay with the dry-farming crops, which are those that are in surplus. Certainly, without the opportunity to diversify and with the farm problem what it is today, the South Dakota farmers' future does not look too bright.

5. Irrigation in the James River Valley with a stabilized water supply would attract industry and processing plants to the area which would help to stabilize our economy and provide employment for those who do not want to farm. The population trend is now away from South Dakota. We now have to raise and educate our children in South Dakota and they are then forced to leave the State and seek employment. South Dakota has the expense and other States get the benefits.

6. The Bureau of Reclamation has spent considerable time and money to give us a half answer on the feasibility of this project—without the completion of the study we will never know the answer. Certainly we feel that farmers are entitled to a completed study report so we can intelligently decide whether or not we believe the project is good or bad for us; farmers in other irrigable areas of the world have been given this opportunity, why not us?

Adopted by the Beadle County Livestock Improvement Association this 9th day of May 1957.

Attest:

[SEAL.]

LAURENCE FRIEDRICHSEN, *President.*
EUGENE C. LARSON, *Secretary.*

RESOLUTION

Whereas this farm organization sincerely believes that water is the lifeblood of South Dakota agriculture, one of our objectives is the complete development and utilization of the water resources of the State of South Dakota and the protection and preservation of the benefits which can be derived therefrom, and

Whereas such development and utilization of these water resources will do much toward adding to the economic security, protection of health, property and enterprise, and the promotion of the prosperity and general welfare of all of the people of the State of South Dakota, and

Whereas the Flood Control Act of 1944 provided for irrigation of 972,510 acres of land in the Missouri, James, Grand, Cheyenne, Moreau, Bad and White River Basins of South Dakota, and

Whereas the Bureau of Reclamation's Interim information report of 1956 for the James division, South Dakota-Missouri River Basin project proves that completion studies on the project are warranted; Now, therefore, be it

Resolved by the Beadle County Crop Improvement Association, That we appeal to the Appropriations Committees of the Congress of the United States to grant the necessary funds needed by the Bureau of Reclamation to complete the feasibility study of the Oahe irrigation unit of the Missouri River Basin project, for the following reasons:

1. Even though the 1956 interim information report did not include for irrigation, Beadle County, there is a definite interest in irrigation which is demonstrated by the increase in well irrigation. The diversion of water from the Missouri River to the James River Valley would help to replenish the aquifer for this pump-well irrigation. In addition to this, we still have hopes

of developing small tracts of irrigation along the Beadle Canal and the James River.

2. Beadle County adjoins project as now proposed. This is a definite asset to us even if this county did not get any irrigation, because available feed crops in below-normal years would permit farmers to purchase feed locally and maintain their livestock herds.

3. Flood control on the James River will be of definite value to Huron and all of Beadle County.

4. Irrigation in South Dakota will bring with it diversification of farm production and will enable the farmers to divert from surplus crops to those not in surplus. This is becoming more important to us every day due to the declining farm income on surplus crops. Without irrigatioin our only choice is to stay with the dry farming crops which are those that are in surplus. Certainly without the opportunity to diversify and with the farm problem what it is today, the South Dakota farmers' future does not look too bright.

5. Irrigation in the James River Valley with a stabilized water supply would attract industry and processing plants to the area which would help to stabilize our economy and provide employment for those who do not want to farm. The population trend is now away from South Dakota. We now have to raise and educate our children in South Dakota and they are then forced to leave the State to seek employment. South Dakota has the expense and other States get the benefits.

6. The Bureau of Reclamation has spent considerable time and money to give us a half answer on the feasibility of this project—without the completion of the study we will never know the answer. Certainly we feel that farmers are entitled to a completed study report so we can intelligently decide whether or not we believe the project is good or bad for us; farmers in other irrigable areas of the world have been given this opportunity, why not us?

Adopted by the Beadle County Crop Improvement Association this 9th day of May 1957.

Attest:
[SEAL]

FRANCIS R. MARTIN, *President.*
GALE PEPPERS, *Secretary.*

HURON, S. DAK., *February 19, 1957.*

Hon. GEORGE MCGOVERN,
Washington, D. C.

DEAR SIR: We, the members of Beadle County Pomona Grange, would urge that appropriations be made for completion of investigation for irrigation from Oahe Reservoir.

Yours truly,

Mrs. MABEL URBAN,
Secretary, Beadle County Pomona Grange.

HURON, S. DAK., *February 25, 1957.*

Hon. GEORGE MCGOVERN,
Washington, D. C.

DEAR SIR: The members of Old Michigan Grange urge that funds be appropriated for completion of investigation of irrigation from Oahe Reservoir.

Yours truly,

MABEL URBAN,
Secretary, Old Michigan Grange.

HURON, S. DAK., *February 5, 1957.*

Hon. GEORGE MCGOVERN,
House of Representatives,
Washington, D. C.

DEAR Mr. MCGOVERN: At the January meeting of Jolly-Fairfield Grange No. 203 I was instructed to write you that we are interested in the Oahe Irrigation project.

There is definitely a need for irrigation in this area even though we have a temporary oversupply of some farm products at the present. This is a project that obviously cannot be constructed on the spur of the moment; therefore we urge that sufficient funds be appropriated to continue and complete the planning

work of the proposed Oahe irrigation project with a view of proceeding with the actual construction work as soon as possible.

Sincerely yours,

(Signed) ——— ———,
Secretary of Jolly-Fairfield Grange No. 203.

RESOLUTION, CITY OF HURON, S. DAK., MAY 6, 1957

Whereas water for irrigation is essential to the stabilization of agriculture and the economy of the James River Valley and the State of South Dakota; and

Whereas the Flood Control Act of 1944 provided for irrigation of 972,510 acres of land in the Missouri, James, Grand, Cheyenne, Moreau, Bad and White River Basins of South Dakota; and

Whereas the city of Huron, S. Dak., with a population of approximately 16,000, is a major marketing and distribution center of the James River Valley with the James River as its principal source of water supply, which supply is adequate for all periods except prolonged periods without precipitation or of drought and is insufficient to induce or provide industrial growth to provide for a stabilized economy; and

Whereas irrigation in the James River Valley from the Missouri River will increase the water supply available for use by the city of Huron and other cities in the James River Valley dependent upon the James River as a source of municipal water supply;

Whereas a stabilized and adequate water supply in the James River Valley will attract industry and processing plants to the area which will help to stabilize a solely agricultural economy that is now dependent upon the vicissitudes of a variable rainfall: Now, therefore, be it

Resolved by the Board of Commissioners of the City of Huron, S. Dak., a municipal corporation:

(1) That the Appropriations Committees of the Congress of the United States grant the necessary funds to enable the Bureau of Reclamation to complete the feasibility study of the Oahe irrigation unit of the Missouri River Basin project.

(2) That copies of this resolution be forwarded to the Appropriations Committees of the Congress of the United States and to the Senators Karl Mundt and Francis Case and Representatives E. Y. Berry and George McGovern.

Passed, approved, and adopted this 6th day of May 1957.

E. F. KARSTENS,
Mayor of the City of Huron, S. Dak.

Attest:

R. E. PETERSON, *City Auditor.*

HURON, S. DAK., *May 10, 1957.*

To the Appropriations Committees of the United States Congress.

GENTLEMEN: By way of introduction, I am 33 years old, a practicing attorney in Huron, S. Dak. I was born here. I married a girl from Bridgewater, S. Dak; and neither she nor I own any farm property which would benefit from the proposed Oahe-James River irrigation project.

This does not mean, however, that we have no interest in such a project. All of us in this area have a vital interest in studies to determine feasibility of irrigation in the Oahe-James River area. If you will permit the time, I should like to explain this interest.

My grandfather came to Beadle County, Dakota Territory, as a young man in 1882. He homesteaded in this county, and spent his active years in the real estate and insurance business in Huron. He did not retire—money was not that plentiful, following the "dirty thirties". Even so, he had great faith in the lands. He died in 1944.

However, I recall clearly one evening in the dust-bowl days, about 1938, when he and I attended a showing of the Passion Play at the Huron College Auditorium. It was a hot, dry, dusty, summer evening. While we were there, storm clouds blew over from the west, accompanied by a high wind and a violent thunderstorm. And we silently prayed for rain.

As we left the auditorium, a few drops spattered on us. They were so full of the dust in the air, they were literally drops of mud. We walked on in bitter silence. Finally my grandfather spoke: "Don't ever settle down in South Dakota." This from a man with great faith in the land, a man who had lived here for better than 50 years.

Subsequently, I saw much of this country of ours while on duty in the United States Navy. I have lived in Maryland, Massachusetts, Idaho, Florida, California, Illinois, and New Mexico. But when the announcement was made about the Pick-Sloan plan, I resolved to return to Huron to live. My decision was based largely on the potential here because of irrigation possibilities. I know of many others whose similar decision resulted from the same consideration.

Are we now to be confronted with the choice of staying and watching the land parch and blow again, or of uprooting our families and moving? And this before we even know whether or not substantial irrigation is feasible?

Of far greater importance than what happens to us is the question of what happens to our Nation. Agricultural land is being cemented under or roofed over at an alarming rate, and before long—in our lifetime—we will be faced with the problem of agricultural scarcity. Would it not be far wiser and more economical to develop irrigation programs in an orderly fashion now, rather than to direct a "crash" program, with its inherent waste, when the pinch is on us? Why "too little and too late" when we can foresee the problem?

Another item: God was with us in World War II. At the time we needed the food and fiber for the war effort, the rains came. Can we depend on it happening again? It would be calamitous to have dust-bowl conditions during a war emergency. Why run this risk, when there is irrigation potential waiting to be developed?

Gentlemen, we are dealing with navigable waters, within the jurisdiction of the United States Congress. This is a program "which we cannot do at all, or cannot do so well for ourselves," and in which we appeal for your help, in the form of appropriations to complete the feasibility study by the Bureau of Reclamation. For those of us who stake our future on the program, for the benefit of the Nation as a whole, for your own enlightened self-interest, we urge this appropriation.

Very truly yours,

CHANDLER L. BEACH.

Senator MUNDT. Mr. Joe Grimes is the next witness for the proponents of irrigation, Mr. Chairman. He is the chief engineer and executive officer of the South Dakota Water Resources Commission.

CHAIRMAN'S WORK FOR RECLAMATION

I would like the record to show that I was not so far wrong when I said the chairman had a part in every irrigation project that was passed because I found out that he did come to Washington as a young lawyer and a sheriff, I believe, to testify in support of the first big governmental project, and the first Government irrigation project was in the State of Arizona.

Chairman HAYDEN. Let me correct the record, if I may, Senator Mundt. I never was a lawyer.

Senator MUNDT. You were a sheriff, Mr. Chairman. Out in Arizona they probably call a sheriff "Judge," so what is the difference?

Chairman HAYDEN. All right.

You may proceed to present your statement, Mr. Grimes.

STATEMENT OF J. W. GRIMES, CHIEF ENGINEER AND EXECUTIVE OFFICER, SOUTH DAKOTA WATER RESOURCES COMMISSION

Mr. GRIMES. My name is J. W. Grimes, I am chief engineer and executive officer of the South Dakota Water Resources Commission.

I have a prepared statement, which I would like to furnish for your record. Attached to it are a half dozen or so short resolutions, and letters, which have references to different projects in our State.

Chairman HAYDEN. That may go into the record.

(The documents referred to appear at the conclusion of Mr. Grimes' oral statement.)

IMPORTANCE OF OAHE INVESTIGATIONS

Mr. GRIMES. My statement contains a request in the amount of the President's budget for work in South Dakota and in the Missouri River Basin. I would, however, like to concentrate on a certain few projects.

You have heard a great deal this morning with regard to the Oahe unit investigations. You have also heard that the completion of these studies is important to the farmers. They must have the figures for that cost to them for water each year before they can make an intelligent decision as to whether or not an irrigation project is a good thing so far as they are concerned in the James River Valley.

Associated with that irrigation project is the possibility of a number of multiple-purpose miscellaneous benefits that will come from that. Some of them have been mentioned here.

MUNICIPAL WATER SUPPLY SHORT

We have the opportunity for a municipal water supply for a large number of towns throughout the valley. They are now currently short on either quality or quantity of water, and some of them are short on both of those counts.

Chairman HAYDEN. I understand that the water is hard to pump. Are they pumping it lower all the time?

Mr. GRIMES. No. We are fortunate in that respect as compared to your own State, Mr. Chairman.

The ground-water supplies in South Dakota have not been exploited for development nearly to the extent that they have in other States. We are in that process now.

NUMBER OF PERMITS ISSUED

I might mention that in the area east of the Missouri River, in this area that we are speaking about, that during the last year and a half there have been appropriate permits for irrigation water, from ground water primarily, issued somewhere to the tune of in the neighborhood of 35,000 acres in eastern South Dakota. Now, that is 4 or 5 times as much irrigation water requested as there have been in eastern South Dakota in the entire history of that department of the State. That would seem to indicate that interest is developing.

We have those municipal water supplies, we have the recharge of the ground waters, which is a limited resource and perhaps only 1 farm out of 6 actually has a supply of water from those ground-water sources, without having to rely on additional resources.

LOWERING OF WATER TABLE

Chairman HAYDEN. That is why I asked the question. Many people have been fooled because they would drill a well and think that would be all there was to it and they would be able to pump at that depth forever. Then a neighbor would start pumping water and somebody else would start and pretty soon the whole water table would go down and down.

There is a denite limit to the supply of water in the ground and it is difficult for people to realize that.

If you bring water from outside of the land, from the river, you maintain that water table so that people can get water from irrigation

of their land and it does help to maintain the water table where they can pump if they have too.

Mr. GRIMES. The ground-water aqueduct with that additional recharge makes a very good distribution system too there.

Chairman HAYDEN. Yes.

OPPORTUNITY FOR FLOOD CONTROL ON JAMES RIVER

Mr. GRIMES. There is an opportunity associated with that eastern South Dakota project to provide for flood control along the James River, for a considerable stretch of the stream, for which in the late 1940's the Corps of Engineers did not actually have a feasible relationship. The combination of the two may very well be a very happy solution for both sides of the story.

In testimony that I presented before the Public Works Committee over on the House side, I asked that the money be made available for a survey on the James River, made available to the Corps of Engineers, so that the timing of that work between the two agencies can go forward properly.

RELATION OF SURPLUS CROPS TO PROJECT

We hear a great deal about development of irrigation projects because of the surplus crops situation, and under present land-cropping practices we do grow surplus crops now in that area. However, we are faced with the fact in this particular case that the first acre probably will not be irrigated, that the soonest that it could be irrigated would not be until 1965 or afterward. That is as a consequence of or on the basis of the estimates of the Department of Agriculture. The surplus crops under irrigation and the increased production that may come from irrigation do not come at the time when we anticipated being faced with the surplus crops situation.

CHOICE OF CROPS

Another very, very important thing about irrigation in South Dakota is associated with the choice of crops. We have a rotation of corn and small grains. We cannot fertilize our lands, because the stands become too great under the farm practices for the late season moisture to support. Yet, just as you mentioned a bit ago, Senator, an application of water to corn, for instance, in the silk and tasseling stage may be the only irrigation.

A 3-inch application may be the only application of water we need in our State to double our crop yield. It offers us an opportunity to fertilize our lands, to keep them in sustained production. To me, that is important.

DEPLETION OF SOIL

If we look back in the history of our own country, let alone the history of other countries, we find that we have mined that fertility of the soil. In the early days of our country, that was true up in the New England States. The South is a very strong example of that very thing, a hundred years ago. We are doing the very same thing now in South Dakota.

Forty or fifty years of agricultural production under the present system of growing crops has resulted, according to the State college, in a 10 to 15 percent loss of fertility over there. Another 40 or 50 years of that same kind of cropping practices will put a tremendous area on a marginal basis, and we cannot be assured, thinking in terms of the long-term future that that area is going to be a grain basin for our State or for our United States. We cannot assume that unless we have this additional moisture and unless we have an opportunity to fertilize those lands to keep them in production.

So that, thinking of it on the long-term basis, it is very, very important not only to the people in that State but to the Nation as a whole.

In the interest of conserving your time, I will say that those are the particular points that I want to bring out.

You have my prepared statement, and unless there are questions, that completes my testimony.

Thank you very much.

Senator MUNDT. Thank you, Mr. Grimes.

Chairman HAYDEN. Thank you, sir. Your complete statement, and attachments, as I previously stated, will appear in the record in full. We will insert them at this point.

(The documents referred to follow:)

My name is J. W. Grimes. I am chief engineer and executive officer, South Dakota Water Resources Commission. I appreciate this opportunity to present to your committee the needs for appropriations to carry forward the Missouri River Basin development through the efforts of the Corps of Engineers and the Bureau of Reclamation.

I wish to stress and summarize certain needs in the Missouri River Basin which are particularly important at the present time.

Completed portions of the program on the main stem and tributaries are accomplishing a tremendous amount of good in the basin. However, the past 3 years of operation have demonstrated that demands for water service are far in excess of the ability of the partially completed system to satisfy. This is especially true since these 3 years have produced much less than average flows in the Missouri River. A large degree of flood protection for downstream investments is an accomplished fact but Fort Randall reservoir levels must be drawn down each year at the expense of power production. Both navigation use and power use of water are curtailed. Anticipated irrigation depletions have not occurred. These conditions will continue until additional water control and water use facilities are available. Since demands for water are continually increasing, the construction program should proceed at as fast a rate as you gentlemen can provide funds for investment in these national assets particularly for Oahe and Garrison Dams.

Irrigation planning work is lagging badly. Definite plans are not reaching the construction proposal stage fast enough to assure orderly basin development. Whether this is due to lack of funds or lack of decision, I do not know, but presentation of sufficiently detailed information is not being obtained to permit farmer evaluation of the farm enterprise business which irrigation is. The extreme lag of this phase of investigations work results in endless arguments and questions among future irrigators, which I am sure will be in evidence before your committee during the course of these hearings. Please provide adequate investigations funds to carry forward the irrigation planning work to the point where the prospective water users can sink their teeth into definite project proposals.

It is not good business to place the farmers in a position over a long period of time with only indefinite, general knowledge of project possibilities while at the same time expecting them to wholeheartedly support the project work and to make commitments binding themselves to construction of the project before they know what obligations they must assume if the project is constructed. This is

now the position of farmers in the James River Valley of South Dakota in the Oahe unit area.

The recently completed report by the Bureau of Reclamation on the Oahe unit contains only one important item of knowledge for the prospective irrigators. It tells him officially for the first time the general area which the Bureau considers would take a good irrigation project. Otherwise the report contains a preliminary feasibility analysis designed for internal Federal Government consideration and even this evaluation is based on a single-purpose irrigation project only. People in the Oahe unit area are interested in the miscellaneous water use purposes that the project can accomplish also. In this semiarid, semihumid region, depending upon yearly rainfall variations, interest is strong in the possibilities the project offers in municipal water supplies, recharge of ground water, flood control, recreation, and others. Complete multiple-purpose evaluation of the Oahe unit should be accomplished. We earnestly request funds for the Bureau of Reclamation to get this job on the road during fiscal year 1958.

Concurrently, the Corps of Engineers should have planning funds for their resurvey of the James River Valley at the same time that the Bureau of Reclamation is doing their investigations on the Oahe unit. There is one project there, not separate projects divided on functional jurisdiction coverage between two Federal agencies.

We need planning money for flood control and related studies for the Corps of Engineers resurvey of the Big Sioux River and the Vermillion River as well as the James River. We need planning money for the Big Bend Dam and Reservoir. We need planning money for irrigation investigations along the main stem of the Missouri and the western tributaries in South Dakota as well as elsewhere. We speak of appropriations here. What we really mean is that we need the definite project relationships evaluated, project plans made and the business proposition determined which are inherent parts of these projects so that the farmer or other water user made decide, organize and make arrangements to assume the responsibilities he must assume if the project is built after he knows the extent to which he is committing himself.

Request is hereby respectfully made for appropriations for all the work in the Missouri River Basin in the amount of the President's request. The request has been cut from those desired before presentation to your committee. If additional cuts are necessary please make such additional cuts as small as possible.

May I have this statement and attached material reflecting local interest in particular areas included in your record of these hearings.

RESOLUTION

Whereas it is necessary that the Oahe unit of the Missouri River Basin project, as authorized by act of Congress approved December 22, 1944 (58 Stat. 887), and acts amendatory thereof and supplementary thereto, be established and constructed:

(1) To provide for the future economic welfare and prosperity of the people of this State, and particularly of the people residing in the area embraced within the boundaries of a conservancy district hereinafter referred to;

(2) To provide for the irrigation of lands within the sections of such district preiodicaly afflicted with drought, and to stabilize the production of crops thereon;

(3) To replenish and restore the depleted waters of lakes, rivers, and streams in such district, and to stabilize the flow of said streams;

(4) To make available within the district, waters diverted from the Missouri River for irrigation, domestic, municipal, and industrial needs, and for hydroelectric power, recreation, and other beneficial and pubilc uses.

Whereas the creation by the South Dakota Legislature of a conservancy district, to be known as the Oahe Conservancy District and consisting of that part of the State which is included in the boundaries of the following counties, to-wit: Brown, Marshall, Spink, and Sully, and of the munipalities of Huron and Mitchell; is the most feasible method to secure to such areas of the State the effective development and utilization of the land and water resources of the State of South Dakota: Now, therefore, be it

Resolved by the board of commissioners of the city of Huron, S. Dak.:

(1) That the 35th session of the Legislature of the State of South Dakota is hereby requested to pass a proper and adequate conservancy

district law in order to assure establishment and construction of the Oahe unit of the Missouri River Basin project as authorized by act of Congress approved December 22, 1944 (58 Stat. 887) to include such areas of the State as will utilize the land and water resources to be developed by this project.

(2) That copies of this resolution be immediately forwarded to the Legislature of the State of South Dakota now in sesssion and particularly the representatives from Beadle County in the South Dakota Legislature.

Passed, approved, and adopted this 11th day of February 1957.

E. F. Karstens,
E. F. KARSTENS, *Mayor.*

Attest:

R. E. PETERSON,
City Auditor.

THE COMMUNITY COUNCIL,
Wagner, S. Dak., August 22, 1956.

Hon. HAROLD LOVRE,
United States Representative,
Washington, D. C.

DEAR CONGRESSMAN: At the regular meeting of the comunity council, held In Wagner, S. Dak., August 20, 1956, the following resolution was passed:

"Whereas considerable interest has developed in irrigation, and many farmers are planning to operate individual projects during the 1957 crop season: Wherefore be it

"*Resolved*, That the community council go on record as petitioning the South Dakota congressional delegation to request a Federal preliminary survey to be made in Charles Mix County."

Anything you can do to speed this survey will be appreciated.

Sincerely yours,

FRED STORK, *Secretary-Treasurer.*

RESOLUTION

Whereas water for irrigation is essential for the stabilization of agriculture and the general economy of the James River Valley and the State of South Dakota to prevent a reoccurrence of the drouth conditions of the thirties;

Whereas the Flood Control Act of 1944 provided water for irrigation of 972,510 arces of land in the Missouri, James, Grand, Cheyenne, Moreau, Bad, and White River Basins of South Dakota;

Whereas priority over other uses has also been given to the use of water for irrigation in those areas west of the 98 meridian;

Whereas this specific allocation to South Dakota in the Flood Control Act of 1944 amounts to 350 billion gallons per year which constitutes one of South Dakota's greatest natural assets;

Whereas the development of irrigation in South Dakota has fallen far behind other phases of development in the Missouri River Basin project; and

Whereas if the State of South Dakota does not take more positive and effective action to develop its irrigation potential, it will be faced with a subsequent loss, to other interest, of its great water resource as allocated to it by the Flood Control Act of 1944: Now, therefore, be it

Resolved by the City Council of the City of Mitchell, S. Dak.—

(1) That the present session of the South Dakota Legislature are urged to memorialize the Congress of the United States to appropriate funds and authorize or empower the Bureau of Reclamation to complete the feasibility study of the Oahe irrigation unit.

(2) That the present session of the South Dakota Legislature are urged to study some type of bill which would make it permissible to establish water conservancy districts within the State of South Dakota and which would also give taxing power to such conservancy district; and, that as soon as such study is made and an acceptable bill is presented the City Council of the City of Mitchell,

S. Dak., urges and recommends its immediate approval by the South Dakota Legislature.

Passed and approved this 4th day of February 1957.

R. N. GRAHAM, *Mayor.*

Attest:

[SEAL] MARGARET GALES, *City Auditor.*

HURON, S. DAK., *February 25, 1957.*

Governor JOE FOSS,
Pierre, S. Dak.

DEAR SIR: Members of Old Michigan Grange (local) went on record as desiring continuation of investigation for irrigation from Oahe Reservoir.

Letters are being sent to Congressmen urging appropriations to continue the work.

Yours truly,

MABEL URBAN,
Secretary, Old Michigan Grange No. 204.

HURON, S. DAK., *February 5, 1957.*

Hon. E. Y. BERRY,
House of Representatives, Washington, D. C.

DEAR MR. BERRY: At the January meeting of Jolly-Fairfield Grange No. 203, I was instructed to write you that we are interested in the Oahe irrigation project.

There is definitely a need for irrigation in this area, even though we have a temporary oversupply of some farm products at the present. This is a project that obviously cannot be constructed on the spur of the moment; therefore, we urge that sufficient funds be appropriated to continue and complete the planning work of the proposed Oahe irrigation project with a view of proceeding with the actual construction work as soon as possible.

Sincerely yours,

DONALD W. OLSON,
Secretary of Jolly-Fairfield Grange No. 203.

RESOLUTION

Be it resolved, That the board of directors of the Redfield Chamber of Commerce at a regular meeting held on the 21st of January 1957 voted unanimously that the further investigation of the Oahe project is vital to this area. Further, we, the Redfield Chamber of Commerce, will assist in any way possible to do our part in helping this project to successful conclusion.

REDFIELD CHAMBER OF COMMERCE,
RICHARD A. BRYSON,
Secretary and Treasurer.

WESSINGTON, S. DAK., *February 1, 1957.*

Gov. JOE FOSS,
State Capitol, Pierre, S. Dak.

DEAR GOVERNOR FOSS: Whereas years of planning are necessary to secure needed information and to draw the necessary working plans for irrigation, and whereas only the preliminary planning for the Oahe project has been completed, and whereas because of variable and often deficient rainfall in this area, irrigation is needed. Therefore we, the Beadle County Farm Bureau urge the continuation and completion of the planning and the beginning of the construction work on the feasible portions of the Oahe project as soon as possible.

Yours truly,

WARD RADCLIFFE,
President of the Beadle County Farm Bureau.

AUGUST 16, 1956.

UNITED STATES BUREAU OF RECLAMATION,
Huron, S. Dak.

GENTLEMEN: At an irrigation meeting held in Geddes last Monday night, August 13, it was unanimously decided by the approximately 100 potential irrigators present that the Bureau of Reclamation be requested to make a preliminary survey and feasibility report covering this area at the earliest possible time. Please consider this letter such a request.

At the meeting a 5-man irrigation committee was elected to spearhead the project. The chairman of the committee is Ignatius Masur, Geddes, S. Dak.

A second meeting is planned for Friday, August 24, at the high-school auditorium in Geddes, at 8:30 p. m. We would appreciate very much having a representative of the Bureau of Reclamation present to further inform the farmers of this area concerning irrigation, at this meeting. Please inform us soon if the Bureau can be represented at this meeting in order that the information may be included in advance publicity.

Sincerely,

HAROLD WILLIAMS,
Secretary, Geddes Irrigation Committee.

TABOR, S. DAK., *September 19, 1956.*

Attention: G. J. Cheney, project engineer.

DEAR SIR: There have been several farmer meetings in this area, including folks from Bon Homme, Yankton, and Charles Mix Counties who are interested in the possibility of irrigation.

We have heard that the first step in determining feasibility for irrigation is to determine whether or not the soil is suitable.

Would it be possible to take preliminary soil tests, so that we can determine whether or not there is a possibility for irrigation in this area?

We would appreciate any assistance you can give us in this matter. Thank you.

Very truly yours,

DAVID BALVIN,
Committee Chairman, Tyndall, S. Dak.
EDWARD HERSHOFF,
HERBERT HERSHOFF,
Utica, S. Dak.
ARCHIE STEBRAL,
LADIMER D. SLAMA,
FRANK W. ZLENEK,
Tabor, S. Dak.

HURON, S. DAK., *February 19, 1957.*

HON. JOE FOSS,
Pierre, S. Dak.

DEAR SIR: We, the members of Beadle County Pomona Grange would urge appropriations be made for completion of investigation for irrigation from Oahe Reservoir.

The above is a copy of resolutions sent to our United States Senators and Representatives in Washington, D. C.

Respectfully yours,

MRS. MABEL URBAN,
Secretary, Beadle County Pomona Grange.

ONIDA, S. DAK., *October 27, 1956.*

BUREAU OF RECLAMATION,
Huron Office, Huron, S. Dak.
(Attention: George Cheney, project manager.)

DEAR SIR: The fourth education meeting was held in Onida September 19, 1956, on proposed irrigation in the Missouri Slopes area of Sully County.

Attendance was good at this last meeting as had been the case for all previous meetings.

The group present expressed a desire for the Bureau of Reclamation to continue their survey work on this irrigation project. They will appreciate any further effort that may be done to get additional information.

This group desires to contact and cooperate with any similar interested group in the James River area.

At the conclusion of this meeting the group elected five farmer members, publisher, and county agent to serve as a contact between people and the Bureau of Reclamation, State water resources commission and congressional delegates. The name adopted for this group was Missouri Slope Irrigation Committee.

This committee hopes that you will be able to continue your work and give us more information in the future.

Sincerely,

MAURICE GREEN,
Farmer Member.
EARL BAXTER,
Farmer Member.
EARL KINDER,
Farmer Member.
C. H. YACKLEY,
Farmer Member.
RICHARD SEAMAN,
Farmer Member.
E. L. THOMPSON,
Publisher.
H. E. WOOD,
County Agent.

Senator MUNDT. Mr. Chairman, out in South Dakota as elsewhere, we believe that the ladies are entitled to the last word. So our last witness, representing the forces in opposition, is Mrs. Florence Cady, of Spink County.

Just to show you how the views are out there, Mr. Chairman, Mr. Earl Crook's county—Mr. Crook testified earlier—has been for a long time a Republican county, while Spink County is also a Republican county. So it would seem that while they agree in politics, in this particular issue we have before us today they do not agree.

I am sure the committee will want to hear from Mrs. Cady.

Chairman HAYDEN. Yes.

We will be very pleased to hear you, Mrs. Cady.

STATEMENT OF FLORENCE CADY, SPINK COUNTY, S. DAK.

Mrs. CADY. Mr. Chairman and Senator Mundt, it takes a brave women to come before a good-looking bunch of men like this and talk on the opposite side.

Senator YOUNG. You certainly won't have any trouble after making a statement like that, Mrs. Cady.

Mrs. CADY. But I am representing a thousand people in my locality. They asked me what the figure was yesterday but I had not counted them. But since then I did count them. I do not have all the signatures of those who told me, but I am here in their interest.

I am right in the middle of this plan for the Oahe Valley. I could have the same setup as Earl Crook, even better, because he has a hill or two on his land while my ground is level and ridge, and I am on the James River.

OPPOSITION TO PRESENT IRRIGATION PROPOSAL

In making this statement, I am here in the interest of those in this area who are definitely opposed to irrigation as it is now proposed.

More particularly, I represent the Anti-Oahe Irrigation Association, who in these petitions will state their opposition to the appropriation of funds for further study of irrigation.

Anyone who may appear before you in the interest of those pushing irrigation represents a small minority of farmers in this area compared to those who represent and who definitely wish no part of the irrigation project. You would have heard their sentiment to this effect long ago had they any idea that there was any possibility that this project was so near completion, or that there was any possibility of its ever being forced upon them in the manner now proposed.

We feel that this could be the crucial moment in the history of this whole sorry plan. During ten years of examining and studying processes and soil-testing procedures—and I may say that it only takes a week to test soil in California, and I imagine that is true in Arizona—our fields have been crossed and recrossed. Yet, to date, no farmer knows what the future plans of the Government are for his particular farm.

INITIAL COSTS PROHIBITIVE

The Bureau of Reclamation has vaguely reported an average cost of $7 per acre for water. It will take 40 years out of the life of each farmer to pay the initial 10 to 20 percent of the cost, which is $981 per acre.

These figures were given us by representatives of the reclamation agency.

Not a signer to the petitions I am presenting here today is modern enough to want to live under that kind of burden of death.

With the cost of the Bureau of Reclamation charge would be added the cost for special farm machinery. It would cost $45,000 for Caterpillars, and $35,000 for carry-off, and the other machines. And there would be an operating cost of $20 to $30 per hour.

The price for leveling our acres would be based on the number of yards per acre, the distance of the haul, the amount of fall for 100 feet, the kind of equipment, and the extent of the contract.

I ask you gentlemen: How many farmers could afford to operate their farms under this handicap? The costs will be the same whether the proposal is studied for 3 years or whether it is a 50-year study.

OTHER FACTORS AFFECTING CROPS

Our growing season, members of the committee, is only 3 months, not 12 months. We do have rainfall—and I have the record right with me on it if you would like it—and the farmland in our area is the best in South Dakota. Drought is not our only hazard. We have hail, rust from too much moisture, cyclonic winds, insects, weeds, and frost. No Government reclamation project could possibly control these situations.

Our God-given rainfall averages 20 inches per year. The highest rainfall was in 1953 when it was 28 and 39 inches, and there was too much excess moisture to harvest the crop.

Earl Crook yesterday complained of the lack of labor. Actually, labor would not be available. The young men of today would not be interested in working 7 days at irrigation when the war effort pays high salaries and shorter hours.

INCONSISTENCY OF PLAN

Finally, I ask you to consider the inconsistency of putting acres into the soil bank, of having wheat allotments to cut down the surplus. The ASC office in Spink County announces more than $1 million will be paid to Spink farmers during 1957 in the soil-bank program. Of this includes $649,948.84 on 894 wheat acreage-reserve contracts, totaling 490,362 acres.

Then promoting and asking for this study of the irrigation project adds millions to the taxpayers' burden. Millions of other acres of productive soil, the richest farmland in the country, will be lost to cultivation entirely.

FIRST CLAIM ON WATER BY MUNICIPALITIES

Some of those who plead for the cause of irrigation are acting in the behest of cities and towns who would use this means to procure power or water for themselves. We hear that in case of low water that human consumption will come first.

That statement comes from the Bureau of Reclamation. So that in this case there would be no water for irrigation.

Is it right to victimize the farm element, who would be paying the bill to this extent?

In presenting this petition, I not only do so on my own behalf and of all the farmer signers thereof, but I am also presenting it as a farm owner. I have lived in the community affected by this proposition for 40 years. I know the results that have been accomplished in this fertile land, and it has been without the aid of irrigation and without interference by the Bureau of Reclamation. From my personal experience in the management and ownership of 960 acres of rich farmland in this area, I believe that the imposition of a tax to bring this unneeded water to our farmers would be a tragic mistake.

MAJORITY IN AREA OPPOSED TO PROJECT

In closing, I want to say that regardless of any personal interest I may have in this project, that I am here in the behalf of the signers of this protesting petition, which has been signed by at least 90 percent of the farmers in the area, who will be affected financially and otherwise with installation of this project.

And I am going to add in here that it is just, that they do not want the work of irrigating.

That seems to us not only a contradiction in the plan of limited acreage and less production, but it also means an imposition of an overwhelming burden of taxation which we cannot and do not want to assume.

Members of the Appropriations Committee, those thousand people just do not want irrigation by the Bureau of Reclamation along our James River Valley. It is not a matter of what you do for us but what you do to us, and to every American taxpayer today that counts.

Thank you.

Chairman HAYDEN. Might I ask, Mrs. Cady, did you ever lose any crops for a lack of rain on these 960 acres that you cultivate?

Mrs. CADY. Yes, I have lost. But I have also lost from hail. I have lost more from hail and from rust and from frost and corn that did not all materialize. That I know.

If we had a 12-month season like you have in Arizona, or 12 months like you have in California, I would not be here today.

But I do think this Appropriations Committee should also find out far more about this.

You should make the study of whether this money should be spent.

DEPENDENCE ON BUREAU OF RECLAMATION

Chairman HAYDEN. I am sorry, but we have to depend upon the United States Bureau of Reclamation who have had long experience in such matters.

The Bureau of Reclamation has made mistakes and some were very serious mistakes. That makes them much more cautious than they have been before. I can understand that is the reason they have taken the time to look into this particular project, because it is definitely a matter of a short growing season and in a climate where you cannot grow lettuce like we do in Arizona, in the wintertime, and things of that kind.

Therefore, I can understand the delay. But I am puzzled about why developing further facts should be objectionable.

Mrs. CADY. It is because they just do not want to irrigate.

I might say to you, "Now, listen, Mr. Senator, Mr. Representative, you should go out and paint, you should build a barn." But if you are not going to raise cattle you do not need a barn.

That is my viewpoint.

FARMERS COULD EXERCISE OPTION

Chairman HAYDEN. I would assume that if the situation were like it is in other areas, that if the area was determined not to be irrigable at a reasonable price, then they could go through with it and those who would want the water could take it and those who did not want it would not have to take it.

Mrs. CADY. I believe you know, Mr. Chairman, that in irrigation, the leveling of the ground to make this good job that you mentioned costs all the way from $18 to $75. We know that.

Chairman HAYDEN. You would not go into an irrigation district and you would not do that unless you thought you could make money on it; is that not correct?

Mrs. CADY. That is right.

And again I say we only have 3 months, just 3 months. This year we are a month late.

Then there is the debt that would come to these people, and so far we have not been given a choice.

We have this little area here—and I will show it to you on this map here—right here, I am right there in the middle.

Senator THYE. Mrs. Cady, may I ask what is your post office address?

Mrs. CADY. Mellette.

Senator THYE. You are right between Aberdeen and Redfield; are you not?

Mrs. CADY. That is right.

Senator THYE. I was born up north of Aberdeen, right near Frederick.

Mrs. CADY. Were you?

Senator THYE. My folks were homesteaded there.

Mrs. CADY. I bet you know some of my folks.

Senator THYE. I know quite a few people up there because I used to travel up there.

Mrs. CADY. At one of the first meetings I went to, a man was there from Frederick. He, too, was working just like I am.

Senator THYE. I know the valley quite well because I was with the Deere people, stationed at Redfield in 1921. I covered the territory including Mellette and all of those towns so I know it very well.

Mrs. CADY. I have a John Deere combine.

VALLEY NOT ADAPTABLE TO ALL PROJECTS

If I might, I would like to show you what I have here, that looks like a piece of stone. Maybe the rest of you would like to look at it. It is not a stone but it is a potato.

You know that some of the things they can do in other places they cannot do in this James River Valley. You know that, Senator Thye.

This happens to be a potato. They made a lot of money out in California, but they could not sell the potatoes. So in California they dried them. I saw a load of 10,000 tons of dried potatoes. They dried them, but we could not do that. We would have to move out of the State if we raised that many and tried to dry them in South Dakota, because the rain would make them pretty rotten.

But they raised them out there in California and dried them if they have too many, and they feed them to the stock, and the stock are happy over it.

Senator THYE. Mr. Chairman, I will say that Mrs. Cady is a devastating witness to those that want reclamation.

Senator MUNDT. I was afraid, Mrs. Cady, that you was showing us a sample of the kind of potato that you raise.

Mrs. CADY. No.

Senator MUNDT. Your predecessor, Mr. Ferguson, brought a piece of dirt with him one time.

Mrs. CADY. I will turn over these records to you, Mr. Chairman.

Chairman HAYDEN. We thank you for your statement, Mrs. Cady.

Mrs. CADY. I thank you very much for your time, Mr. Chairman.

Senator MUNDT. Thank you. And I can assure the thousand members of your group that they could not have found a more eloquent or persuasive witness, I am sure.

Mrs. CADY. Thank you, Senator. Sometimes we muff the ball a little bit, but we are in there pitching. Thank you.

Senator MUNDT. That concludes our presentation of witnesses, Mr. Chairman.

Chairman HAYDEN. Thank you, Senator Mundt.

We will now proceed with the witnesses from North Dakota.

Senator Young.

Senator YOUNG. Mr. Chairman, there has been a great deal of interest in irrigation in North Dakota as long as I can remember. I have contended many times in testifying at meetings of our commit-

tee and during our discussions that Garrison Dam itself would be a net loss to North Dakota if we did not receive a large amount of irrigation as a result of it. As you know, we lost around 450,000 acres in the Garrison Basin area.

A large number of people from North Dakota, townspeople and farmers alike can give you some indication of the great amount of interest there is in North Dakota concerning irrigation projects. It is true that there is a little opposition in the State, but there is so little as to be practically negligible. In fact, I do not believe I have received a half dozen letters, in the 12 years that I have been in the Senate in opposition to the proposed Garrison irrigation project. We will make this just as short as we can, Mr. Chairman and members of the committee.

I am happy to present as our first witness, Gov. John E. Davis, of North Dakota. He is himself a farmer.

Chairman HAYDEN. Come right up, Governor.

STATEMENT OF HON. JOHN E. DAVIS, GOVERNOR OF THE STATE OF NORTH DAKOTA

SUPPORT OF MISSOURI VALLEY INVESTIGATIONS

Governor DAVIS. Mr. Chairman and members of the committee, I have a prepared statement, and I will just proceed to read it.

I am John E. Davis, Governor of North Dakota.

My purpose in coming before your committee is to indicate my own support and also that of the people of my State of the budget estimate for continuing Bureau of Reclamation investigations in the Missouri River Basin in fiscal year 1958, and particularly in North Dakota.

Before assuming the governorship the first of this year, I was for a number of years actively engaged in ranching operations in Sheridan County and in operating a country banking business in my hometown of McClusky in that county.

LACK OF WATER CONTINUED HAZARD

The uncertainty in the production of grain and forage crops and the recurring shortage of grazing grass because of undependable moisture have been natural hazards with which I have lived since boyhood. As a consequence, I have become intensely interested in the Garrison diversion unit irrigation development proposed by the Bureau of Reclamation for central and eastern North Dakota. Although no part of our holdings are in an irrigable area of the unit, I am personally as enthusiastic about the proposed development as though all of our property were irrigable.

The plan report of the Bureau on this proposed million or more acre irrigation development has recently been or is expected soon to be approved by the Secretary of the Interior. The project can be constructed in stages and will require more than 50 years to complete. Segments can be built at a rate adjusted to meet the increase in population and consequent food-growing requirements.

PROVISIONS OF PROJECT

Essentially the project would replace the half-million acres of fertile bottomlands and high-quality grazing lands which are being inundated by the huge Garrison and Oahe projects on the Missouri River. Such replacement is a part of the agreement between Missouri Basin States and is a basic provision of the 1944 Flood Control Act.

Although it was the understanding that the reclamation development in North Dakota should proceed at the same rate and concurrently with the progress of the Garrison Dam and Reservoir construction, reclamation has been permitted to lag and is now years behind the original schedule.

This is of considerable concern to me as our contribution of reservoir sites has adversely affected our tax structures.

The reduction in taxable property and loss of income occurs at a time when we are confronted with the rising cost of our State government. The orderly installation of irrigation facilities will eventually more than amend this loss, but it should be undertaken as soon as possible.

IRRIGATION TO BE INTEGRATED INTO ECONOMY

Irrigation will be integrated in North Dakota's agricultural economy and will not bring new lands into production. The farmers want to irrigate, as is shown by the tremendous signups petitioning the creation and organization of local irrigation districts.

A balanced industrial development in the State will depend in large part on a stable diversified agricultural output. The best diversification can be realized through irrigation and will in turn do much toward stabilizing our farm economy.

Irrigation in my State will provide a new frontier for our youth who otherwise must go elsewhere to earn their income. Our young people are our greatest resource. Unless there are additional opportunities, such as this development will provide, our youth will continue to leave the State.

WATER AND WILDLIFE RESOURCES

The project plan is balanced in that it provides for industrial, municipal, and stock water supplies over a large area. It includes enhancement of fish and wildlife resources and offers unusual recreational opportunities to an area in which there are now relatively very few.

It is my understanding, Mr. Chairman, that included in the budget estimate of $3 million for Missouri River Basin investigations for next year is an item of $851,000 for continuing work on the Garrison diversion unit in North Dakota. With the enormous amount of detailed and technical work necessary to be carried on in order to keep investigations for this unit on the most economical schedule, it is felt that an additional $100,000 is needed for next year.

I mention this for the committee's consideration in connection with the Garrison diversion unit activities for the coming year.

TRANSMISSION DIVISION

While I am discussing the Bureau of Reclamation estimates for next year, I would also like to indicate my support of estimated funds

needed to carry forward the transmission lines construction program. It is my understanding that this phase of the Bureau activities in my State and area is approaching completion. I trust that the budget request of $1,668,000 for this purpose will be made available.

Your committee and the Congress have been very understanding and generous to North Dakota during the past decade. For this we are grateful. It is our earnest hope that the necessary funds will be forthcoming in the future to complete the many features of the overall development planned by the Bureau of Reclamation for our State.

Thank you for permitting me to make this presentation, Mr. Chairman.

Chairman HAYDEN. Do you have any questions, Senator Thye?

Senator THYE. No questions, Mr. Chairman.

Chairman HAYDEN. Senator Young.

Senator YOUNG. Governor, do you have any figures on the amount of money that the State of North Dakota has contributed to the investigation of this project in working with the Bureau of Reclamation; that is, matching funds?

Governor DAVIS. Perhaps Mr. Hoisveen, can answer that.

STATEMENT OF MILO W. HOISVEEN, NORTH DAKOTA STATE ENGINEER

CONTRIBUTION OF STATE WATER CONSERVATION COMMISSION

Mr. HOISVEEN. We have contributed well over $1 million, that is, the State water conservation commission, toward the Bureau of Reclamation, in the State.

Senator YOUNG. I think, Mr. Chairman and Senator Thye, this gives you some idea of the interest and support engendered by the State of North Dakota for this irrigation project.

Mr. Chairman, we have a few more witnesses to present statements.

The next witness is Mr. Roy A. Holand, who is chairman of the Garrison Diversion Conservancy District.

Incidentally, Mr. Holand is a next-door neighbor of mine.

Chairman HAYDEN. You may proceed with your statement, sir.

STATEMENT OF ROY A. HOLAND, CHAIRMAN, GARRISON DIVERSION CONSERVANCY DISTRICT, LA MOURE, N. DAK.

Mr. HOLAND. Mr. Chairman, at the outset, may I say for the record that I feel very much at home before this committee because my father homesteaded in the State of the Senator from Minnesota and I now live in the hometown of the Senator from North Dakota, and I occassionally go to the Southwest for little trips.

My name is Roy A. Holand. I live at La Moure, N. Dak. I am serving as the director from La Moure County on the Garrison Diversion Conservancy District and am also the chairman of the board of directors of that organization.

SUPPORT OF INVESTIGATION BY GARRISON DISTRICT

As such chairman, I wish to support the appropriation of adequate funds to the Bureau of Reclamation for carrying forward programed

investigational work on the Garrison diversion unit during the ensuing fiscal year.

The Garrison Diversion Conservancy District Act was first enacted by our State in 1949 and revised, modified, and reenacted in 1955. It provides a legal and responsible governmental entity on the State and local levels through which the Garrison diversion multipurpose unit can be developed over a period of many years. The district originally contained 22 counties. Since its activation, three more counties have applied for admission and have been included. It now contains 45 percent of the State's area, 59 percent of her population, and 60 percent of the assessed property valuation.

Senator YOUNG. Might I interrupt, Mr. Holand?

Mr. HOLAND. Yes.

AUTHORITY TO LEVY FUNDS

Senator YOUNG. What authority do you have to levy in support of this work? How much can you levy?

Mr. HOLAND. We have authority to levy up to 1 mill at the present time. We are levying part of that amount.

Incidentally, we think we have a rather interesting and unusual approach in that all of the property, both rural and urban, is included for assessment purposes.

In other words, as I pointed out in my statement later on, 90 percent of our revenue for the Garrison Diversion Conservancy District will come from the beneficiaries who are indirectly benefited, as opposed to those 10 percent who are the prime irrigators.

Senator THYE. Mr. Chairman, might I inquire at this point?

Chairman HAYDEN. Yes, Senator Thye.

Senator THYE. Do you expect to have irrigation from the Garrison project, Mr. Holand?

Mr. HOLAND. Yes.

NATURAL SITUATION FOR IRRIGATION

We have a very natural situation in connection with Garrison. We are about over the divide. There are certain very natural courses through which the water can flow to different parts of our State, such as the James River and Cheyenne River, and there will be storage in certain lakes and also through the northern part of our State in the Souris Valley area.

Senator THYE. As long as I have interrupted you, sir, I want to say you are ably represented by Senator Young as a State, and most certainly you are ably represented as a neighbor of Senator Young.

Mr. HOLAND. Thank you.

Senator THYE. You are certainly well represented here on the Appropriations Committee.

Mr. HOLAND. We are very proud of the work that Senator Young is doing.

Senator THYE. You have a right to be proud.

Senator YOUNG. Thank you, gentlemen.

STRONG LOCAL SUPPORT

Mr. HOLAND. In contrast to the previous delegation, we have very strong local support for our project.

Incidentally, Senator Young, you will be interested in knowing that in the James River Valley, that petitions were recently sent from La Moure County to the State water commission. They contained about 90 percent of the farmland that is considered suitable for irrigation.

Senator YOUNG. When I go home to North Dakota I occasionally question farmers to make sure of their views on irrigation. I am amazed that so many of them do want to irrigate. They have the plans all worked out and they know what they want to do. There is practically no opposition and almost solid support for it.

OPPOSITION FROM ABSENTEE OR LARGE OWNERS

Mr. HOLAND. The only difference is that the opposition comes from nonresident landowners or from the extremely large landowners who are interested in development. But even including the opposition, we still have about 90 percent support for this project.

Senator THYE. It is true that if you have a crop standing there just getting to the stage of maturity and then there was a lack of water, it would not take long for that crop to wither and dry up, and your entire year's effort would be lost.

SHORT GROWING PERIOD DEMANDS WATER IN MIDSEASON

Mr. HOLAND. Where you have a 3-month growing period, it is more important to have the water at the right time than where you have the 12-month growing period. That is because if you do not have the water for a week or two at the critical time, your whole year's effort is lost, whereas if you have a 12-month growing period you still get more chances to raise another crop before the calendar year is out.

FARMERS INFORMED BEFORE SIGNING PETITION

Incidentally, in connection with this large assignment that we have—and at the present time we have about 320,000 acres and a petition for the formation of an irrigation district—we expect about 175,000 acres more in the State of North Dakota before the end of this year.

In doing that, we insisted that our farmers and others be fully informed about irrigation before we permitted them to sign an irrigation petition. Some farmers earlier in our experience indicated that they were interested in irrigation and wanted to proceed, but we did not permit them to proceed and petition until they were fully informed about it. We wanted them to know the pros and cons of this whole problem, and after they did receive full information they did proceed on this basis.

This money that has been requested is extremely important to us because there are certain surveys that must be made before we can proceed with this project further.

ADDITIONAL MONEY NEEDED

It was previously requested that $851,000 be asked for this work; we have had so many farmers who have asked to be included in irrigation districts that the $851,000 will not make surveys available to those farmers for about 4 or 5 years on that schedule. We have

therefore asked that that amount be supplemented by another $100,000 so that during the next year or two we can bring semidetailed and detailed studies to this particular area.

Thank you, gentlemen, for this opportunity of appearing before you and bringing this information to you.

Chairman HAYDEN. Thank you, sir.

Senator YOUNG. Mr. Chairman, the next witness is Mr. Milo W. Hoisveen, State engineer for the State of North Dakota.

Chairman HAYDEN. You may proceed with your statement, sir.

STATEMENT OF MILO W. HOISVEEN, NORTH DAKOTA STATE ENGINEER AND CHIEF ENGINEER, NORTH DAKOTA STATE WATER COMMISSION, BISMARCK, N. DAK.

DUTIES INCLUDE ESTABLISHING IRRIGATION DISTRICTS

Mr. HOISVEEN. Chairman Hayden, Senator Thye, Senator Young, it is very good to be here.

My name is Milo W. Hoisveen. I am State engineer and chief engineer for the North Dakota State Water Commission.

One of my duties is to establish irrigation districts when petitioned to do so. To date petitions from five different areas in the Garrison diversion unit have been filed in my office requesting that irrigation districts be formed. These districts will enable the farmers included therein the opportunity to avail themselves of irrigation water which will be supplied through the development of the Garrison diversion unit. The petitions recived to date approximate 320,000 acres.

I might add at one time during the pool-level controversy, that organized opposition appeared on behalf of the low-level people. There are many of the people that signed that petition at that time that are now signing up for these irrigation districts.

This was just in one locality.

Petitions requesting the establishment of irrigation districts were not circulated until after February 1, 1957. That was the approximate date that the Bureau of Reclamation announced that the project was determined to be a feasible one.

DEMONSTRATED SUPPORT FOR GARRISON UNIT

The support of the State of North Dakota for the Garrison diversion unit has been displayed for many years. The State water-conservation commission has contributed well over $1 million to the Bureau of Reclamation during the past decade to investigate this unit. I desire to support the Bureau of Reclamation's request of $851,000 to be utilized on continuing the Garrison diversion unit investigations.

DEMAND IN STATE FOR SPECIALISTS

Because of the acute demand for engineers, draftsmen, soil scientists, and irrigation specialists now on the rolls of the Bureau in North Dakota, I believe that any reduction in this estimate could greatly impair the programed activities of this unit for the next year. It is felt that these experienced people can turn out almost 50 percent more

finished work per man than is the average. I have included in my statement a list of these technicians, which indicates the preponderance of scientific, technical, and highly trained personnel presently employed. There are some 162.

Senator YOUNG. Mr. Chairman, could the figures that he is omitting reading now from his prepared statement be inserted into the record as part of his statement?

Chairman HAYDEN. We will be glad to do that. Certainly.

(The material referred to follows:)

Area represented:	*Size of proposed district (acres)*
Oakes area	49,000
La Moure County and Stutsman County	11,500
Cass, Richland, and Ransom Counties	99,000
Warwick-McVille area	40,000
Souris loop area	120,000
Total	319,500

TECHNICIANS

	Number
Topographic surveyors and rodmen	[1] 65
Land classfiers and helpers	[1] 25
Soils laboratory technicans and aids	6
Foundation drillers (canals and structures)	[1] 6
Agricultural engineers (land leveling)	3
Canal and drain layout engineers	12
Canal engineers	6
Drainage engineer	1
Structural engineers	2
Agricultural land-use and economic specialists	3
Geologists (foundation and construction materials)	2
Hydrologists	2
Draftsmen	18
Planning engineers	2
Administration (personnel, finance, procurement, office services, and management)	9
Total	162

[1] Seasonal employment for 20 rodmen, 12 soils survey helpers, and 6 drillers.

Mr. HOISVEEN. From this list, it can be assumed that most of the employees would be in great demand because of their special training. Replacement would be difficult and costly. Any reduction in the estimate would, I feel, require much greater expenditure as to future date. The fact is that an additional $100,000 over and above the budget estimate could very well be put to good use in 1958 in order to proceed as rapidly as possible.

TRANSMISSION DIVISION

I also wish to add my support to the estimate for continuing construction of transmission lines and facilities in North Dakota. There remains but little work to be done to complete this program, and I am hopeful that the funds therefor can be made available for completing such construction next year.

Chairman HAYDEN. Is my recollection correct, that the reason why these various irrigation districts are organized as they are in South Dakota is that, until there is some agreement reached that the money expended by the Federal Government will be reimbursed and that there

will be somebody who can say he is in a position to reimburse it, they cannot start the project? Is that it?

Mr. HOISVEEN. That is the present policy of the Bureau of Reclamation. That is why these people have been so interested in signing up, that the Bureau will have this entity to deal with.

Chairman HAYDEN. Where they have this assurance of replacement?

Mr. HOISVEEN. That is correct, sir.

Chairman HAYDEN. Thank you, sir.

Mr. HOISVEEN. Thank you.

Senator YOUNG. Mr. Chairman, our next witness is Mr. Erling P. Nicolaison, of Minot, N. Dak., who is one of our best North Dakota farmers.

Chairman HAYDEN. You may proceed with your statement, sir.

STATEMENT OF ERLING P. NICOLAISON, FARMER, MINOT, N. DAK.

EXPERIENCE OF LARGE LANDOWNER

Mr. NICOLAISON. Mr. Chairman, my name is Erling P. Nicolaison, and my home is in Minot, N. Dak. I came to the United States from Norway at the age of 16 years, penniless and without any promise of a job. Through hard labor, thrift, fortunate farm conditions, and under the best Government in the world, I have been able to acquire a farm of 1,800 acres and the ownership of a half interest in another 4,000-acre farm. On the latter we have for some years operated an alfalfa dehydration plant and equipment valued at more than a third of a million dollars.

This large farm is located in the proposed Garrison diversion project area and contains 3,000 irrigable acres. My partner and I are willing to agree to the sale of excess holdings in order to comply with the provisions of the Federal reclamation law. In this way we feel that we are providing added opportunities to our young people to acquire farm units of their own.

BENEFITS OF IRRIGATION TO AREA

Irrigation will assure us of an opportunity to make beneficial use of our stored Missouri River water. In addition, it will stimulate diversified farming and thus contribute to stabilizing our agricultural and business economy. The water-development program and the security it will provide is the kind of a heritage I desire for my children and grandchildren.

I came here from the old world and found the United States is a wonderful country. Now my main hope is to help in some way to leave it even better than I found it.

I am grateful for the opportunity to appear and make this statement.

Chairman HAYDEN. Thank you for your very interesting statement, sir.

Senator YOUNG. Did you start from scratch, Mr. Nicolaison; that is, start as a hired hand when you came to North Dakota?

Mr. NICOLAISON. I started out as a hired hand. Then I was drafted into the service, and then somebody beat me out of everything that I had saved up.

Senator YOUNG. Thank you, Mr. Nicolaison.

Our next witness, Mr. Chairman, is Mr. Walter Essig, a farmer in Sheridan County, N. Dak.

Chairman HAYDEN. We will be glad to hear your statement now, sir.

STATEMENT OF WALTER ESSIG, FARMER, SHERIDAN COUNTY, N. DAK.

Mr. ESSIG. Mr. Chairman, my name is Walter Essig. I farm in Sheridan County, in North Dakota, on the 440 acres homestead where I was born. I started farming for myself in 1933, when drought came to the Great Plains. I saw my cattle starve on a diet of Russian thistles.

YOUNG PEOPLE LEAVING FARMS

Like my parents, I want to see my four children succeed without the hardships that I went through. I would like to see my two sons stay on the farm if they like that way of life. Our dryland farm would hardly support one family in the drought, so my three brothers have scattered and gone to the cities.

This story can be repeated many times over in our neighborhood. It is a story of larger farms, fewer people, with a grain economy that depends on weather risks.

IRRIGATION WOULD STABILIZE INCOME

My interest in irrigation comes after thinking over the farm income problem. I cannot plan for the entire season, because it all depends on the hazards of weather. I cannot plan for next year, for a drought might wipe us out again.

Irrigation would mean stability of income. It would mean that on my 115 acres of irrigable land, I would produce feed and pasture cattle to tide me through. We sought stability of income through price control, but price support means nothing if we cannot produce something to sell.

I hope you gentlemen of the committee will retain the amounts needed to continue development of the Garrison diversion project.

Chairman HAYDEN. Thank you, sir.

Senator YOUNG. I believe your experience in farming is about the same as my own.

Thank you.

Mr. Chairman, our next witness is Mr. Richard Lofthus, who is a long-time friend of mine. I have been acquainted with him for a good many years and served in the State senate with him.

Chairman HAYDEN. You may proceed, sir.

STATEMENT OF RICHARD LOFTHUS, FARMER, McVILLE, N. DAK.

Mr. LOFTHUS. Mr. Chairman, my name is Richard Lofthus. I am a bona fide farmer and live near McVille in Nelson County, N. Dak. I have served in the North Dakota Legislature as both a senator and representative for 14 years. I own land that will be irrigated through the development of the Garrison diversion unit and am a member of the Nelson County Farm Development Committee.

FARMERS PETITION TO ESTABLISH IRRIGATION DISTRICT

Recently our farmers of my county presented petitions to the State engineer requesting the establishment of an irrigation district containing 35,500 acres of irrigable land.

We look to irrigation as a means of stabilizing our agricultural economy which has been adversely affected in the past during periods of drought. In North Dakota, as in many other States, dryland agriculture is very undependable when one has to annually face the threat of drought and shortage of water for crops, home and livestock. This surely was the case during the 1930's and in 1889 and 1890, when our farms produced very little, our people left the State, and numerous relief programs were necessary.

IRRIGATION TO SUPPLEMENT PRESENT OPERATIONS

Irrigation development, as proposed under the Garrison diversion unit, will supplement our present dryland operations and will provide the diversification we have long desired. It will help solve one of the problems facing our State and the Nation, which is that of surplus production of wheat, by channeling acreage now used for wheat production to other nonsurplus crops that are more adaptable to irrigation. It can prevent a recurrence of the disastrous effects of another drought period that is certain to come.

I urgently request your favorable consideration of the appropriation of adequate funds to the Bureau of Reclamation for continuing the investigations of the Garrison diversion unit so irrigation can be developed in North Dakota without costly delays.

WATER LEVEL FALLING

I have lived in North Dakota for 70 years, and in that time I have seen bigger lakes go down 25 feet and smaller lakes dry up from time to time. If this should continue for another 70 years I do not know what the State of North Dakota will look like.

I thank you for the opportunity to make this statement.

Senator YOUNG. Thank you, Mr. Lofthus.

Our next witness is Mr. William Bosse, Mr. Chairman.

Chairman HAYDEN. You may proceed with your statement, sir.

STATEMENT OF WILLIAM BOSSE, FARMER, COGSWELL, N. DAK.

Mr. BOSSE. Mr. Chairman, I am William Bosse. I am a farmer residing in Sargent County, N. Dak., near the town of Cogswell. I have joined with the 170 other Sargent County farmers who have petitioned to organize an irrigation district by requesting that the 960 acres of my land be included in this district.

MEMBERSHIP OF SARGENT COUNTY GROUP

I am appearing before your committee as a representative of our Sargent County Farm Development Committee and of the other 22 similar county committees in the Garrison Diversion Conservancy District. These committees have a membership of 287 farmers, all of whom are serving voluntarily, without compensation.

Our committees are composed of actual farmers who own irrigable land that can be served by the Garrison diversion unit. They have been organized to provide a means whereby the 10,000 to 15,000 North Dakota farmers who will be affected by the project can learn the facts about irrigation and express their wishes about the development of the project. These committees have conducted the irrigation district petition signup in several counties in the project area.

In every area of the Garrison diversion unit there is an increasing demand upon the part of our farmers for the early development of irrigation. This fact is supported by the large number of irrigation district petition signers.

IRRIGATION TO STABILIZE PRODUCTION

Irrigation will provide our farmers the assurance of a stabilized production now lacking in our dryland operations. It will benefit the dryland farmers and ranchers throughout the State by providing them with an adequate and accessible feed supply during drought periods. Irrigation will bring a more prosperous and sound economy to our State and consequently our Nation.

Our farmers feel that if our country is to grow and prosper we must develop our natural resources to the fullest possible extent. In North Dakota we have an outstanding opportunity to do this in the Garrison diversion unit. Our farmers are anxious to proceed as quickly as possible. I sincerely ask your favorable consideration of the appropriation request for the Garrison diversion unit for next year.

Thank you for the privilege of making this statement.

Chairman HAYDEN. Thank you, sir.

Senator YOUNG. Thank you, Mr. Bosse.

Our next witness is Mr. Mark Andrews, Mr. Chairman, of Mapleton, N. D.

Chairman HAYDEN. We will be glad to hear you, sir. You may proceed with your statement.

STATEMENT OF MARK ANDREWS, MEMBER, BOARD OF DIRECTORS, GARRISON DIVERSION CONSERVANCY DISTRICT, MAPLETON, N. DAK.

Mr. ANDREWS. Mr. Chairman and Senator Young, I appreciate this opportunity to appear before you. In the interest of saving time, I would like permission to file the bulk of my statement that I have prepared and just make 1 or 2 comments about my county.

Chairman HAYDEN. You may proceed to make your remarks and your complete statement will appear in the record.

(The statement referred to appears at the conclusion of Mr. Andrew's oral statement.)

Mr. ANDREWS. Thank you, Mr. Chairman.

As you notice from my prepared statement, I am operating a farm near Mapleton. The farm has been in our family since before North Dakota became a State.

REQUEST FOR SPEEDUP IN SURVEY

In my office as a director of the conservancy district for Cass County, I have had the unique experience of having two lawyers approach me and ask me just what steps they could take to proceed to urge the Bureau of Reclamation to speed up the land classification survey. South Cass County has been surveyed, and over 90 percent of the land is signed up in an irrigation district. That happened within 2 or 3 weeks of the time we gave them an opportunity to sign up. That is some 63,000 acres.

The north area, which we can estimate as holding only 90,000 acres of irrigable land, is an area from which we have had petitions signed by farmers on well over 130,000 acres of land, demanding immediate action, if at all possible, toward completion of the surveys. That would seem to indicate some of the desire on the part of the farmers.

CITIES' GROWTH OUTRUNS WATER SUPPLY

Secondly, in our county, which is the largest in population in North Dakota and also the wettest, in terms of annual rainfall, if I might mention that, we have the largest city in North Dakota, which is the city of Fargo. The Army engineers estimated that in 1960 the city will have outrun its water supply.

The city of Morehead, Minn., which is the sister city to Fargo, in Senator Thye's State, across the river, depends on water wells for their municipal water supply. But since it takes about 4 gallons of water to dilute 1 gallon of sewage, they are very dependent on river water for sewage disposal, and they also are in a very serious spot.

So the people in my county are 100 percent behind this project.

Mr. YOUNG. Thank you, sir.

Chairman HAYDEN. Thank you, sir. Your complete statement will go into the record at this point.

(The statement is as follows:)

Mr. Chairman, my name is Mark Andrews. I operate a farm near Mapleton, N. Dak., which was established by my grandfather over 70 years ago. On our farm we raise small grains, soybeans, and sugar beets, and are presently irrigating 160 acres by sprinklers. I serve Cass County on the board of directors of the Garrison Diversion Conservancy District. I am appearing before your committee today in support of adequate funds for the Bureau of Reclamation to continue the investigational work for the Garrison diversion unit.

The small population and lack of property valuation has made it difficult in North Dakota to accomplish needed and worthwhile improvements for our people. This situation has been made more critical through the loss in our State of 566,000 acres of good farmland to the mainstem reservoirs on the Missouri River. We have supported the construction of these reservoirs because, through the utilization of floodwaters stored therein, we feel we can replace this lost agricultural resource and at the same time stabilize the agriculture in a wide section of the State.

The economy of North Dakota is based almost entirely on agriculture. Our agriculture is of the "boom or bust" dust type that varies with the rainfall we receive. This is apparent from our static population during the last 30 years and the ever-increasing tendency toward larger farms. The development of the Garrison diversion unit will provide more farm opportunities and thereby result in an expanding and sound economy for North Dakota.

The Garrison diversion unit can be developed by stages as the Congress desires so as to gradually integrate with the State's dryland farming and help supply the food needs for our growing Nation. It will enable us to diversify our opera-

tions and grow nonsurplus crops. It will stimulate the economic growth and prosperity of our State which, in turn, will have a beneficial effect on our national economy.

I wish to express my sincere appreciation for the opportunity to make this statement.

Chairman HAYDEN. I am sorry to say that I have a note here that has been just handed to me, which states that the Vice President will not be in the Senate today and that I will have to open it up.

So I will just turn over this hearing to you.

Senator YOUNG. Mr. Chairman, let me say that we appreciate your hearing the witnesses out of order. The hearings were not scheduled to start for some time.

Chairman HAYDEN. I am glad we served their convenience.

Senator YOUNG. We appreciate your courtesy very much.

I might say, gentlemen, that Senator Hayden is President pro tempore of the Senate and in the absence of the Vice President he has to preside over the Senate.

We will now proceed with our witnesses.

The next witness is Mr. Robert Massee, president of the North Dakota Reclamation Association.

STATEMENT OF ROBERT MASSEE, PRESIDENT, NORTH DAKOTA RECLAMATION ASSOCIATION, GRAND FORKS, N. DAK.

Mr. MASSEE. Senator Young, I will just read my prepared statement, if I may.

Senator YOUNG. Yes.

Mr. MASSEE. My name is Robert Massee. I am president of the North Dakota Reclamation Association, representing approximately a thousand residents of our State vitally interested in the future development of our water resources. Our family has owned and operated a dairy processing plant in Grand Forks, N. Dak., for 36 years. I am particularly concerned about the competitive quality of North Dakota dairy products in the markets of our Nation.

DAIRY INDUSTRY NEEDS STABLE IRRIGATED CROPS

The dairy industry in our State is faced with a problem of obtaining quality dairy products in an area where farmers are continually in and out of dairying.

Our State dairy farmers would have a surer production approach with dependable irrigated crops of corn and alfalfa. The stability that comes with irrigation combined with proper use of fertilizer would help bring a higher grade of dairy products from our State to the American market.

By means of irrigated crops we could accomplish the upgrading not only of our State dairy products but also of such commodities as beef and lambs. Accordingly, there certainly would be a substantial increase in the farmer's net cash income even from the same total volume he is now marketing.

Thank you, Senator.

Senator YOUNG. I think yours is a very good statement, Mr. Massee, and, in my opinion, it is a pretty good answer to some of those who oppose irrigation, particularly those we heard today.

Mr. MASSEE. That is why I was disappointed to see Senator Thye leave. I would have welcomed a little cross-questioning there.

Senator YOUNG. Thank you, Mr. Massee.

Our next witness is Mr. R. L. Dushinske, president of the Missouri-Souris Projects Association.

You may proceed, sir.

STATEMENT OF R. L. DUSHINSKE, PRESIDENT, MISSOURI-SOURIS PROJECTS ASSOCIATION, DEVILS LAKE, N. DAK.

Mr. DUSHINSKE. Senator Young, I have a joint prepared statement here for myself and Mr. Oscar N. Berg, our executive secretary. In the interest of getting this hearing over with a little faster, I will just file the statement for Mr. Berg and myself.

Senator YOUNG. Very well. We can place that in the record after the conclusion of your oral testimony.

(The statement referred to appears at the conclusion of Mr. Dushinske's oral statement.)

Mr. DUSHINSKE. Thank you, Senator.

REMARKABLE SHOWING IN NUMBER OF SIGNERS

I would just like to add the comment that in the signup of irrigation districts, the original goal was for 100,000 acres. I think the fact that 300,000 acres signed up is slightly remarkable. Also remarkable is the fact that there has been little or no opposition to the program in the State.

Senator YOUNG. The amount of interest that has been expressed in reclamation in North Dakota has been amazing to me. It is hard for me to realize there is that much interest in irrigation on the part of the farmers.

Mr. DUSHINSKE. There is the further fact that we have had comparatively wet years. We have had good years of good income.

Senator YOUNG. Legislation to establish a conservancy district would not have been approved by the State legislature unless there was an interest in it on the part of the farmers.

SOLID SUPPORT FOR GARRISON DAM

Mr. DUSHINSKE. I might say that the conservancy district covers half the State, and quite a bit of it is using water from the Garrison Dam, particularly the city of Grand Forks. They have been solidly behind it for years.

I think that is another remarkable fact.

Senator YOUNG. Thank you, sir. We will place in the record at this point the joint statement that you have submitted for yourself and Mr. Berg.

Mr. DUSHINSKE. Thank you, sir.

(The document referred to follows:)

JOINT STATEMENT OF R. L. DUSHINSKE, PRESIDENT OF MISSOURI-SOURIS PROJECTS ASSOCIATION, AND OSCAR N. BERG, EXECUTIVE SECRETARY

Mr. Chairman, my name is R. L. Dushinske, of Devils Lake, N. Dak. I am president of Missouri-Souris Projects Association, a nonprofit organization formed 11 years ago for the purpose of promoting on all levels the development of the State's water resources.

Most of the local work has been the arranging of meetings with farmers for the dissemination of information on irrigation practices. Irrigation farmers from irrigation areas in North Dakota and Montana have been invited to speak to our potential irrigators so that dry-land farmers converting to irrrigated farming would have first-hand information on such practices.

A large majority of farmers in the areas proposed for irrigation in the Garrison diversion unit where such meetings have been held have already indicated their interest in the formation of local irrigation districts. They have made such determination on the basis that irrigation offers a means of assuring more stable production and returns irrespective of the season's rainfall. Potential irrigators with children yet on the farm are in hopes that the development of irrigation will be the means of interesting the young people to remain on the land rather than migrate to urban centers already overcrowded.

The organization which I represent is wholeheartedly supporting the budget estimate for continuing investigational activities on the Garrison diversion unit in 1958, and is hopeful that an amount of $951,000 will be recommended for such purpose.

Mr. Oscar N. Berg, executive secretary, Missouri-Souris Projects Association, of Minot, N. Dak., joins me in this statement.

I appreciate being permitted to express these views.

Senator YOUNG. I would like to read now a list of others appearing in behalf of the Garrison diversion irrigation projects. They are:

OTHER WITNESSES LISTED

Mr. L. C. Hulett, Mr. R. E. Sylvester, Mr. Carlo G. Keitel, Mr. George F. Toman, Mr. Richard P. Gallagher.

Also among the witnesses listed are:

Mr. Vernon Cooper, secretary of the Garrison Diversion Conservancy District, who will file a statement, and Oscar Lunseth, mayor of Grand Forks; Mr. William Corwin, a member of the State water commission, and Mr S. W. Thompson, who has been interested in water projects long before my time and was the original sponsor of water projects in North Dakota.

Also listed are:

Hugh Farrington, publisher of the Harvey Herald; Mr. E. M. Gregory, agricultural development agent of the Great Northern Railway; Mr. Al Dexter, who is agricultural development agent for the Northern Pacific Railway; and Mr. Fred J. Fredrickson, representing the Greater North Dakota Association.

Are there any other statements to be made?

APPRECIATION OF CHAIRMAN'S WORK

Governor DAVIS. Senator, in behalf of all of the group from North Dakota, I would like to thank Senator Hayden for making these arrangements and for fitting this hearing into a tight schedule. We are appreciative also in making these hearings possible for us while we are here. We greatly acknowledge, on behalf of all, the consideration that has been given to us and the courtesy you have shown us.

Senator YOUNG. Thank you, Governor. You folks made a very fine presentation.

If there is nothing further, we will conclude the hearings this morning.

(Whereupon, at 12 noon, Thursday, May 16, 1957, the subcommittee recessed, to reconvene subject to call of the Chair.)

PUBLIC WORKS APPROPRIATIONS, 1958

MONDAY, JUNE 17, 1957

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to call, in room F–82, the Capitol, Hon. Carl Hayden (chairman of the committee) presiding.

Present: Chairman Hayden, Senators Young and Dworshak.

Also present: Senator O'Mahoney.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENTS OF W. A. DEXHEIMER, COMMISSIONER; S. W. CROSTHWAIT, ASSISTANT COMMISSIONER; A. R. GOLZE, CHIEF, DIVISION OF PROGRAM COORDINATION AND FINANCE; N. B. BENNETT, JR., CHIEF, DIVISION OF PROJECT DEVELOPMENT; F. E. DOMINY, CHIEF, DIVISION OF IRRIGATION; C. C. BAKER, ASSISTANT CHIEF, DIVISION OF POWER; AND SIDNEY D. LARSON, DIRECTOR, DIVISION OF BUDGET AND FINANCE, DEPARTMENT OF THE INTERIOR

COLORADO RIVER APPROPRIATIONS

Chairman HAYDEN. The committee will be in order.

Senator O'Mahoney, we are pleased to hear from you.

Senator O'MAHONEY. Thank you very much. It is always very nice to be back in this committee even though as merely a witness.

I want to call particular attention, Mr. Chairman, to the appropriations for 1958 for the Colorado River.

I am glad Mr. Dexheimer is here. Last year he and I had a colloquy before this committee. It appears on page 184 of the Public Works Appropriations for 1957 on the Bureau of Reclamation and Department of the Interior, Power Marketing Agencies.

The date when these hearings began was May 24, 1956.

On page 184 thereof, Mr. Dexheimer was testifying in response to some inquiries of mine:

FULL UTILIZATION OF WATER

Senator O'MAHONEY. Do I understand your statement now to be that with the presently authorized projects there still will be a surplus of over 3 million acre-feet of the upper basin water?

Mr. DEXHEIMER. Yes, sir.

Senator O'MAHONEY. That over and above the commitments to the lower basin and to Mexico?

Mr. DEXHEIMER. Yes, sir.

Senator O'MAHONEY. So that to fully utilize this water, it may be necessary later on to make additional authorizations to fully utilize the water.

Mr. DEXHEIMER. To fully utilize the water, of course, there would be required additional development and authorizations, whether done by the Federal Government or somebody else, for taking water to use in whatever manner the upper basin States might determine at a later stage.

It does give, in the way of water supply, still a very large field for development over what is authorized in the present project.

TWO RELATED PROJECTS REQUESTED

Senator O'MAHONEY. I take it from your statement that the plan which you have developed and for which appropriations are being asked is based first on the construction of Glen Canyon and Flaming Gorge.

Glen Canyon would be in order to store the water which must be delivered to the lower basin States to keep that water stored there so that, throughout the development of the upper basin, we shall not be falling behind in the requirements for delivery below?

Mr. DEXHEIMER. Yes, sir; that is the schedule and our plan of development is to develop the Glen Canyon and begin to fill that at the earliest time that it can be done from surplus flows over and above those needed in the lower basin.

Senator O'MAHONEY. But simultaneously with that, you will be able to do something with Flaming Gorge?

Mr. DEXHEIMER. Simultaneously, yes; we would begin storing water up there, looking always at the commitment to deliver water at Lees Ferry to the lower basin and storing only that surplus to requirements downstream.

Therefore, we feel that it is essential to get these storage reservoirs started and ready to store water at the earliest possible time, because until they are filled sufficiently to meet the downstream needs, you could not assure these participating projects a supply of water if the flow of water happened to be short, as it has been in the last few years, of even meeting the downstream requirements. That is why we planned the development to start those two storage reservoirs just as quickly as we can and why we feel it is essential that no time be lost in starting those 2 dams.

I think, Mr. Chairman, unless there are some other questions, that briefly covers the projects.

Chairman HAYDEN. Thank you.

There we terminated our discussion on an understanding that the two projects would proceed simultaneously. What is your understanding now, Mr. Dexheimer?

CONTRACTS AWARDS AWAIT FUNDS

Mr. DEXHEIMER. Senator O'Mahoney, it is still the same. The storage of water can be accomplished at approximately the same time, provided of course always, that surplus waters are available over those downstream commitments which we must release under terms of the compact. We have, as you know, awarded the contract for the Glen Canyon Dam, and the work is progressing at that site.

We plan to award a contract, assuming that we get the full amount of our fiscal 1958 appropriation request, for the Flaming Gorge Dam in the spring of 1958, and, being a somewhat smaller dam than the Glen Canyon, it can be completed at approximately the same time or perhaps even earlier than the Glen Canyon Dam under that schedule so that we would, assuming water is available, begin storage of water in both reservoirs at approximately the same time.

Senator O'MAHONEY. What contract has been let on Glen Canyon?

SPECIFIC CONTRACTS LET

Mr. DEXHEIMER. Several contracts have been let, but particularly the right diversion tunnel contract was let some time ago and the work is progressing very well on that tunnel.

In addition, in April of this year we awarded contracts for just under $108 million to the Merritt-Chapman & Scott Corp. for the construction of the dam and a park.

Senator O'MAHONEY. What has been done for Flaming Gorge?

Mr. DEXHEIMER. On Flaming Gorge we have had to build access roads as we did at Glen Canyon. We have awarded several contracts for building the roads in to Flaming Gorge. We have completed the exploratory drilling and are well along with the final designs and the specifications. We have also recently awarded a contract for $2,672,000 for access roads, streets, utilities, and housing for Government employees at the Flaming Gorge site, so that, because of the need of getting into that site with access roads and having some housing available, we utilized this year's fund for those purposes and, as I mentioned, the main contract for the dam is well along toward being ready to advertise for bids.

Senator O'MAHONEY. But that contract cannot be ready to offer until the spring of next year, is that my understanding?

Mr. DEXHEIMER. That is our present schedule, Senator; yes, sir.

ESTIMATE FOR FLAMING GORGE

Senator O'MAHONEY. How much is the estimate for Flaming Gorge? How much has been assigned to that?

Mr. DEXHEIMER. The request for 1958 is $4,800,000.

Senator O'MAHONEY. It is $4,890,000, according to Mr. Beasley's letter to me.

Mr. DEXHEIMER. I was stating it roughly. Yes, sir.

Senator O'MAHONEY. When will the contract be let?

Mr. DEXHEIMER. We expect to let it early in the spring of 1958.

UNOBLIGATED BALANCE OF 1957 APPROPRIATION

Senator O'MAHONEY. What is the balance unobligated of the appropriation for fiscal 1957?

Mr. DEXHEIMER. We are not anticipating any. Our latest report, Senator, indicates that we are going to utilize all of our 1957 funds.

Senator O'MAHONEY. You would not object then to a statement in the report that it is the plan to continue to proceed simultaneously with Flaming Gorge, as you have testified, sir?

Mr. DEXHEIMER. Not at all, sir. We would not object.

Senator O'MAHONEY. Mr. Chairman, I hope that some statement to that effect can be placed into the report.

LETTER OF OTIS BEASLEY

I would like to put into the record a letter, dated May 31, 1957, which I have received from the administrative assistant Secretary of the Interior, D. Otis Beasley, with respect to this matter.

Chairman HAYDEN. That may be done.

(The letter referred to follows:)

DEPARTMENT OF THE INTERIOR,
Washington, D. C., May 31, 1957.

Hon. JOSEPH C. O'MAHONEY,
United States Senate,
Washington, D. C.

DEAR SENATOR O'MAHONEY: This is in further reference to your letter of May 11, 1957, concerning the status of work on the Flaming Gorge Unit of the Colorado River storage project. We acknowledged receipt of your letter on May 14 and we have since received your second letter of May 11 calling attention to a change in one of the figures cited in your first letter.

In your letter you ask that you be furnished a statement on obligations and expenditures for the service units of the storage project including Flaming Gorge. The table enclosed shows this information.

As you will see from the table there has been no diversion of funds for the Flaming Gorge Unit from that earmarked at the time of the appearance of Bureau representatives before the Senate Appropriations Committee last year. It had been intended that a contract would be let for a diversion tunnel at Flaming Gorge this spring. After further study of the most economical procedure it was decided that the work could be done more efficiently by including the diversion tunnel in the contract for the dam.

In preparation for construction of the dam we have proceeded this fiscal year with work on the access road and completion of our plans for camp facilities. This action has been necessary because no suitable housing exists within 60 miles of the dam site and camp facilities must be available at the time construction of the dam is undertaken. We will use portable houses and trailers to the extent we can. We also must make provision for camp water supply and sewerage system. During construction of the regular camp facilities we will establish an office in a warehouse at the dam site so that we will have everything in readiness to properly serve the contractors operations.

The budget estimate for fiscal year 1958 in the amount of $4,890,000 for the Flaming Gorge Unit includes funds to award a contract for construction of the diversion tunnel and dam in the fiscal year 1958. Assuming congressional approval of the budget estimates, we would advertise for bids early in the calendar year 1958 with expectations that an award would be made in March or April of 1958 depending on the circumstances surrounding the bids we receive. This schedule, again assuming adequate appropriations in subsequent years, would permit filling of the reservoir beginning in 1961 on a coordinated basis with the beginning of storage at Glen Canyon Dam.

If there is any additional information that you need, please let us know.

Sincerely yours,

D. OTIS BEASLEY,
Administrative Assistant, Secretary of the Interior

Upper Colorado River Basin fund

	Funds available for obligation	Obligations incurred to Apr. 30, 1957	Unobligated balance to Apr. 30, 1957	Expenditures, fiscal year 1957 to Apr. 30, 1957	Unexpended, Apr. 30, 1957
Colorado River storage and participating projects:					
Flaming Gorge unit, Utah	$1,300,000	$1,122,178	$176,822	$1,013,107	$286,893
Glen Canyon unit, Arizona-Utah	[1] 10,377,000	7,768,295	2,608,705	5,185,500	5,191,499
Navaho unit, N. Mex.	800,000	350,807	449,193	250,553	549,446
Transmission division	48,000	41,937	6,063	21,937	26,065
Advance planning	1,575,000	1,342,688	232,312	1,201,421	373,579
Total, upper Colorado River Basin fund	14,100,000	10,625,905	3,473,095	7,672,518	6,427,482

[1] Includes contribution of $500,000, State of Arizona; and $600,000 Public Roads Administration allocation.

SHOSHONE EXTENSION UNIT

Senator O'MAHONEY. My concern, Mr. Chairman, is of course to make sure that this would proceed as rapidly as it is possible to proceed.

Mr. Dexheimer, what about the Shoshone extension unit?

Mr. DEXHEIMER. Senator O'Mahoney, the report on that by the Bureau of Reclamation was sent to the State of Wyoming and to the local people for their perusal. In February of this year a meeting was held in the area where all interested parties were invited to discuss the report and informally give us their reaction to that. As a result of that meeting, at least a large percentage of the people attending the meeting appeared to object to going ahead with the project at this time.

Senator O'MAHONEY. Who were the people appearing?

HEARING IN WYOMING

Mr. DEXHEIMER. The local people who are invited with the irrigation districts and the cities in the area.

Senator O'MAHONEY. That was at the hearing out in the State?

Mr. DEXHEIMER. Yes, sir. In view of their attitude and the subsequent letter from the State engineer of Wyoming, we have decided that it would not be appropriate to proceed with that work at this time. Until such time as the water exchange and sharing can be worked out locally, it does not seem proper to go ahead.

Senator O'MAHONEY. You undoubtedly have had some correspondence about this, and I understood that you had in no way changed your view with respect to the feasibility of the project but, of course, since there was lack of agreement among the folks principally concerned, you were willing to let the matter rest.

Mr. DEXHEIMER. Well, that is correct, Senator. The people must cooperate in sharing the water supply and, in some instances, it might require curtailment of the present uses of water, and they are not yet willing to do so, so that we do not feel that we should push the project until such time as they do work out those cooperative arrangements.

HOUSE REPORT ON PUBLIC WORKS

Senator O'MAHONEY. On page 16 of the House report of the public works appropriation bill for 1958 I find, in addition to the Shoshone project, an allocation of $875,000 for the Eden project. Is that satisfactory to you?

Mr. DEXHEIMER. Yes, sir; it is.

Senator O'MAHONEY. You are making no appeal from the House on that?

Mr. DEXHEIMER. No, sir. That is the full amount that we requested in the budget, and we have no reason for appealing in that case.

GLENDO UNIT

Senator O'MAHONEY. That is what I understood.

How about the Glendo unit. The allowance there by the House is $9,951,000.

Mr. DEXHEIMER. That is the full amount of our budget request and we think that is adequate.

Senator O'MAHONEY. The Owl Creek unit is $1,100,000.

Mr. DEXHEIMER. That is the same status, Senator, the full amount of the request.

Senator O'MAHONEY. And you are making no appeals from the decision of the House with respect to any of these projects in Wyoming?

Mr. DEXHEIMER. No, sir; not as long as they have given us the full amount of our budget request. That is correct.

Senator O'MAHONEY. You cannot go above that. I want to keep you on the beam.

Thank you very much, Mr. Chairman.

Chairman HAYDEN. You are welcome.

Senator YOUNG. Mr. Chairman, may I ask a few questions at this point?

Chairman HAYDEN. Certainly.

MISSOURI RIVER BASIN PROJECT

Senator YOUNG. Mr. Dexheimer, I know that the House cut investigations for the Missouri River Basin project. Was the budget estimate $3 million?

Mr. DEXHEIMER. Yes, sir.

Senator YOUNG. They cut it, I believe, to $2 million.

Mr. DEXHEIMER. Yes, sir.

Senator YOUNG. I note this language in the report:

It is directed that no more than $500,000 be allotted to the Garrison diversion unit and that no more than $100,000 be allotted to the Oahe unit.

GARRISON DAM DIVERSION INVESTIGATION

What was your budget estimate for the Garrison diversion investigation?

Mr. DEXHEIMER. $781,000.

Senator YOUNG. When did you expect to complete the investigations under the budget estimate?

Mr. DEXHEIMER. Well, those investigations will run for a great many years. We have completed a report on the main diversion works. These funds now will be used for soil surveys and additional investigations in the irrigation areas, so that those things can be planned and we will have adequate soil surveys prior to going ahead, and we want to continue that investigation. Of course, the planning and investigation work on that unit could run for a good many years before the full development is made.

Senator YOUNG. Prior to this cut, the North Dakota Reclamation Association wanted an increase of $100,000 over and above the $781,000 which you had in the budget. They thought that amount was absolutely necessary. Now you have a cut of nearly $300,000 below that, which means that you are going to have to lay off a lot of your good men there.

Mr. DEXHEIMER. Yes, sir. We would like to have the full amount of our request in that case.

LAYOFF OF EMPLOYEES UNDER CUT IN FUNDS

Senator YOUNG. There really is no economy, is there, in laying off the type of men you need for this type of project and then possibly looking for them again a year or two afterward?

Mr. DEXHEIMER. It is not only not economical in that regard but it is certainly, in my opinion, not economical to reduce investigation money at any time while you have so many projects that need to be adequately investigated and planned in order to come up with sound and feasible project reports. The more investigation you can get prior to requesting authorization, I think the better projects you come up with and the more economical development you can have.

Senator YOUNG. And the sounder program you will have in the future, too.

REDUCTION IN INVESTIGATIONS FUNDS

Mr. DEXHEIMER. Yes, sir. And, if you notice, the House committee has reduced our investigation funds by over 25 percent in their recommendations. I strongly urge the committee to restore the full amount of our investigation funds, and not only in the Missouri Basin but every place, because we have had great difficulty in carrying on these investigations. We have lost a lot of our good men with prior cuts and have been through that experience. It certainly is not sound business. The amount of money involved in these investigations is comparatively very small. In addition, of course, when the projects are built, that becomes part of the reimbursable costs.

Senator O'MAHONEY. Mr. Chairman, I would like to associate myself with the opinions that are being expressed by Mr. Dexheimer. Let me tie it to the upper Colorado River. The water from that stream has been pouring down into the lower basin and across the line into Mexico and the gulf for untold decades without being used. The sooner we store that water, the sooner we save it, the sooner we carry on the investigations for development, the better off we will be.

INADEQUATE INVESTIGATIONS WASTEFUL

Chairman HAYDEN. Might I note, sir, that the failure to make adequate investigations in prior years has resulted in wasteful expenditure of money.

For a reclamation project to be successful, it not only has to have water, but has to have good land. If you try to put water on land that is not suitable for reclamation, it is going to be waste of money and a disappointment to the families of the men who come out hoping to get a farm and do not get one.

Senator YOUNG. Mr. Chairman, the same thing happened with respect to the Missouri-Souris in western North Dakota. Had sufficient investigations been conducted earlier, it would have been learned that much of the land was not irrigable. It might have been possible to modify the Garrison diversion plan years sooner.

I remember when I first served on this committee that you, as chairman, and Senator O'Mahoney were always very strongly in favor of investigation. I, too, believe that that is the soundest course to follow. I can understand that there should be very few new starts in projects

this year, but it seems we ought to accelerate rather than reduce the investigations at this time.

Senator O'MAHONEY. Mr. Chairman, this reduction might seriously affect projects that are very much needed in the State of Wyoming. These are participating projects. Seedskeedee is one of them. $310,649 was allocated for that. Once we begin cutting the appropriation for investigations you never know where the axe is going to fall. I think Seedskeedee is pretty well protected so far as this year is concerned, is it not?

Mr. DEXHEIMER. That is correct. The House committee did not recommend reduction in the upper Colorado funds, so that that is a separate fund now.

WESTERN ATTITUDE TOWARD INVESTIGATIONS

Senator O'MAHONEY. When I am talking in favor of investigation, I am talking for the entire West, am I not?

Mr. DEXHEIMER. Yes, sir.

Senator O'MAHONEY. And for the Bureau of Reclamation.

Mr. DEXHEIMER. In this particular instance, they did not cut the upper Colorado investigation funds, but they did cut all other investigation funds throughout the West.

Senator O'MAHONEY. I am glad that the chairman, as usual, knows just where the ball is on the diamond. Thank you very much, Mr. Chairman. I appreciate the opportunity.

Chairman HAYDEN. You are very welcome.

Mr. Commissioner, do you have a general statement which you would like to submit to the committee? Do you want to submit it for the record and highlight it, or how do you want to handle it?

PREPARED STATEMENT

Mr. DEXHEIMER. I think, Mr. Chairman, in the interest of saving your time, I could brief it and perhaps put the full statement in the record.

Chairman HAYDEN. Without objection, that will be done.

(The statement referred to follows:)

STATEMENT OF COMMISSIONER DEXHEIMER

I am pleased to be able to present to this committee, Reclamation's proposed program and fund requirements for 1958. Our program is designed to continue construction and other work now under way at a minimum rate, and also to start a few new projects.

We are requesting a total of $199,312,000 in new funds under our five appropriation heads: "General investigations," "Construction and rehabilitation," "Upper Colorado River Basin fund," "Operation and maintenance," and "General administrative expenses."

This amount is a rockbottom estimate of our needs, arrived at after 9 months of review and debate to formulate the lowest feasible budget. By delaying the award of some construction contracts and postponing related actions the Bureau expects to keep its important work going forward. The justification material before this committee reflects this policy. It represents the best judgment of the Bureau's field engineers and my office in Washington as to what can be done to keep work moving without actually stopping work or issuing slowdown notices to our contractors.

DECREASED PURCHASING POWER OF DOLLAR

The committee appreciates that the purchasing power of the dollar is much less than it used to be. We have made a study of the decreasing value of the dollar as it relates to Reclamation construction. We applied the Bureau of Reclamation construction cost index. Other indexes would give similar results. The 1958 request for a construction appropriation of $160,800,000 (including upper Colorado Basin fund) is worth only $59,555,000 in terms of 1940 dollars. This latter figure, representing the present purchasing power of the dollar, is lower than the equivalent appropriation in 12 of the past 25 years. This includes such recent years as 1953 and 1957 and prewar years of 1933 and 1938. Attached to this statement is a tabulaiton showing the purchasing power of the Reclamation construction appropriation for all years, 1930 through 1958, using 1940 as a base of unity. It is important to note that for the last 5 years Reclamation construction has leveled off, even though the dollar appropriations have increased 39 percent.

We have also made a comparison study of the Glen Canyon Dam and powerplant with the Hoover Dam and powerplant. In making this comparison we have broken it into three parts as shown on the attached tabulation. The first compares the physical data. The dams are very much alike in that respect.

We compared the construction costs of the Hoover Dam and powerplant with those of the Glen Canyon Dam and powerplant without adjustment for the decreasing value of the dollar. Then we made an identical comparison in which we have reduced the dollar cost of Glen Canyon Dam and powerplant to an equivalent basis of the Hoover Dam and powerplant through utilization of cost indexes.

This latter comparison is most interesting and shows that the Glen Canyon Dam and powerplant will actually cost less than the Hoover Dam and powerplant on a cost per acre-foot of storage capacity for Glen Canyon of $2.55, compared with $2.87 for the Hoover Dam. The cost of kilowatts installed will be greater for Glen Canyon because of the smaller total capacity of the plant (1,249,800 versus 900,000 kilowatts at Glen). If we equate the capacities with the kilowatts at Hoover the kilowatt cost would be less than Hoover. This comparison shows that we have a very good construction contract on the Glen Canyon Dam and powerplant. It further reflects the notable improvements in the fields of design, construction methods, and machinery installation which help to offset the decreasing purchasing power of the dollar.

With permission of the chairman I shall take up briefly the appropriation items in the order in which they appear in the budget.

GENERAL INVESTIGATIONS

We are requesting $5,932,000 for fiscal year 1958 for all phases of the general investigation activities of the Bureau. After an allowance to cover the cost of the civil-service retirement fund this appropriation will permit us to continue at approximately the same level as during the current year. We believe that the amount requested represents the minimum necessary to continue in 1958 the Bureau's long-range planning for the further development of the water resources of the Western States.

CONSTRUCTION AND REHABILITATION

The amount requested for construction and rehabilitation during fiscal year 1958 totals $135,658,000, including funds for retirement costs. This compares with an appropriation of $143,975,500 for the current year. These funds are designed to carry out in an efficient and economical manner the construction to ultimately provide needed water for thirsty land in critical areas of the West. A major portion of the appropriation is to finance construction work already underway.

There are some 75 projects or units, including those on which minor construction work is being performed and those on which rehabilitation work is being done. More than three-fourths of the total funds requested will be expended on nine major projects. These are Central Valley, Santa Maria, and Ventura projects in California; Rogue River project, Talent division, Oregon; Weber Basin project, Utah; Columbia Basin project, Washington; Glendo unit, Wyoming; Helena Valley unit, Montana, and additions to the electric power-transmission system in Missouri River Basin. During the year 6 projects and

1 unit of the Missouri River Basin project will be completed. Rehabilitation work on 10 projects is scheduled for 1958.

The estimate includes funds for the initiation of construction on 3 regular projects and 3 units of the Missouri River Basin project. They are the Wapinitia and Crooked River projects in Oregon, the Little Wood River project, Idaho; the Ainsworth and Farwell units in Nebraska, and the Shoshone extension unit, Wyoming, of the Missouri River Basin project. However, recent developments indicate that the Bureau should not proceed with construction on Shoshone extension unit in 1958. These new developments have been authorized by the Congress, and all preliminary work thereon has been completed.

The estimate includes $7,700,000 for loans to irrigation districts for construction of distribution systems in connection with federally constructed projects as provided in Public Law 130, 84th Congress. This program was initiated with funds provided in the Second Supplemental Appropriation Act of 1957.

During fiscal year 1958 it is estimated that 256,000 acres of new land will be brought under irrigation. This will bring the total land served by Reclamation with full and supplemental water to 8,532,100 acres. An increase of 74,100 kilowatts of installed generating capacity during 1958 will bring the total installed capacity of the Bureau's generating facilities to 5,162,000 kilowatts.

UPPER COLORADO RIVER BASIN FUND

The Bureau is requesting $25,142,000 to continue work on the Colorado River storage project. This is an increase of $11,734,000 over the amount appropriated for the current year after giving effect to civil-service retirement costs. The amount requested will provide for the continuation of construction of the Glen Canyon Dam, Arizona, the Flaming Gorge unit, Utah, and the Navaho unit, New Mexico, and for advance planning on the Curecanti unit, Colorado, and other authorized participating projects. As you know, the Government received a very favorable bid on the Glen Canyon Dam, and the work is going forward. We expect that construction of Flaming Gorge Dam will be underway by the spring of 1958. It will take most of our funds for these two units, but some work will be done on the Navaho unit and advance planning will continue on selected participating projects. The budget does not provide funds for starting construction work on any of the participating projects.

OPERATION AND MAINTENANCE

The estimate for "Operation and maintenance" is $28,338,000. This is approximately the same amount as was appropriated for 1957 after giving effect to the civil-service retirement costs. While new facilities will be added in fiscal year 1958 it is anticipated that we will be able to operate and maintain the Bureau facilities within the level of the 1957 appropriation by the transfer, for operation and maintenance, of other facilities to the water users organizations.

GENERAL ADMINISTRATIVE EXPENSES

The estimate for this appropriation is $4,242,000. This is an increase of $78,000 over the amount appropriated for 1957 after making adjustment for the contribution to the civil-service retirement fund. With this amount we believe we can administer efficiently the Bureau's programs and carry out effectively the mandates of the Congress.

Mr. Chairman, this concludes my statement. We are prepared to present in detail the programs included in the estimates and answer any question that the committee may have.

Purchasing power of appropriations for construction and rehabilitation based on Bureau of Reclamation construction cost index 1940 equals 1.00 for fiscal years 1930 through 1958 [1]

Fiscal year	Appropriations and allotments for construction and rehabilitation	Bureau of Reclamation construction cost index 1940 equals 1.00 [2]	Purchasing power of appropriations in 1940 Bureau of Reclamation construction cost index dollars (col. (2) plus col. (3))
(1)	(2)	(3)	(4)
1930	$17,525,000	1.196	$14,653,010
1931	7,756,000	1.073	7,228,332
1932	30,700,600	.851	36,075,911
1933	14,576,788	1.071	13,610,446
1934	109,618,200	1.173	93,451,151
1935	37,966,100	1.128	33,657,890
1936	39,200,000	1.158	33,851,468
1937	39,691,500	1.108	35,822,653
1938	76,570,000	1.017	75,290,069
1939	38,780,000	1.013	38,282,330
1940	74,521,783	1.000	74,521,783
1941	69,424,922	1.220	56,905,674
1942	95,852,059	1.430	67,029,412
1943	85,801,170	1.630	52,638,755
1944	34,131,339	1.530	22,308,065
1945	20,681,868	1.630	12,688,263
1946	109,430,740	1.660	65,922,133
1947	101,612,103	1.980	51,319,244
1948	128,950,229	2.140	60,257,116
1949	246,916,676	2.200	112,234,853
1950	335,659,738	2.020	166,168,187
1951	243,733,000	2.250	108,325,778
1952	207,602,725	2.400	86,501,135
1953	177,797,991	2.450	72,570,609
1954	115,669,660	2.350	49,221,132
1955	132,057,000	2.360	55,956,356
1956	146,041,000	2.550	57,270,980
1957	156,975,500	[3] 2.620	59,914,313
1958	160,800,000	[3] 2.700	59,555,556

[1] Appropriations to date for fiscal year 1957. Appropriation estimates for fiscal year 1958 including loan program $7,700,000, upper Colorado River Basin fund $25,142,000, new starts $2,000,000.

[2] Bureau of Reclamation Construction Cost Index established 1940 and maintained to date. For years 1930-39, Bureau of Reclamation Cost Index trend is adapted to trend of Bureau of Public Roads Composite Index 1925-29=1.00, which was paralleled by Bureau of Reclamation.

[3] Estimated.

Comparison of physical and cost data for Hoover Dam and powerplant with Glen Canyon Dam and powerplant

	Hoover Dam and powerplant	Glen Canyon Dam and powerplant
A. Physical data:		
(1) Type	[1]	[1]
(2) Capacity—acre-feet	29,830,000	28,000,000
(3) Height—feet	726	700
(4) Length—do	1,244	1,500
(5) Volume of dam—cubic yards	3,245,612	4,770,000
(6) Powerplant capacity installed—kilowatts	1,249,800	
(7) Powerplant capacity ultimate—do	1,354,300	[6] 900,000
B. Cost data:		
(1) Contract award for dam, powerplant and appurtenances	[2] $48,890,995	[3] $107,955,522
(2) Total estimated cost including materials furnished excluding power machinery and installations	92,000,000	[4] 187,127,000
(3) Estimated cost of power machinery and installations	[5] 44,873,475	[4] 106,006,000
(4) Total estimated cost of dam, powerplant, appurtenant works, power machinery and installations	136,873,475	293,137,000
(5) Total estimated cost per acre-foot of storage capacity, excluding power machinery and installation, (item B (2) divided by item A (2))	3.08	6.68
(6) Total estimated cost per kilowatt of ultimate installed kilowatt capacity (item B (4) divided by item A (7))	101.06	325.71
Assuming ultimate kilowatt capacity same for Hoover and Glen Canyon (1,354,300 kilowatt)	101.06	216.45
C. Cost data in terms of 1940 purchasing power of dollar based on Reclamation Cost Index 1940 equals 1.00 and as related to Bureau of Public Roads Composite Cost Index for prior years 1930–39:		
(1) Contract awards for dam and powerplant	45,564,767	41,204,398
(2) Total estimated cost excluding power machinery installations	85,740,913	71,422,519
(3) Total estimated cost including power machinery installations	127,561,487	111,884,370
(4) Total estimated cost per acre-foot of storage capacity excluding power machinery and installations	2.87	2.55
(5) Total estimated cost per kilowatt of ultimate installed kilowatt capacity	94.18	[6] 124.32
Total estimated cost per kilowatt of ultimate installed kilowatt capacity assuming ultimate kilowatt capacity same for Hoover and Glen Canyon (1,354,300 kilowatts)	94.18	82.61

[1] Concrete arch—gravity.
[2] Contract awarded to Six Companies, Inc., March 1931. Excludes furnishing of cement, reinforcing steel, pipe and fittings, conduits, valves, gates and hoists and structural steel.
[3] Contract award to the Merritt-Chapman & Scott Corp., April 1957, including furnishing of items in footnote 2.
[4] Estimated by project.
[5] Data from Secretary's annual report, fiscal year 1931.
[6] Current ultimate kilowatt capacity.

BUREAU OF RECLAMATION REQUEST

Mr. DEXHEIMER. Request for the Bureau of Reclamation under 5 appropriation heads, totals $199,212,000. Those appropriation heads are "General investigations," "Construction and rehabilitation," "Upper Colorado River Basin fund," "Operation and maintenance," and "General administrative expense."

Mr. Chairman, ever since I have been Commissioner of Reclamation in the last 4 years, I have tried to present a very realistic and rock-bottom estimate. The administration is making a valiant effort to keep the budget expenditures down, and I believe, as a taxpayer, that that is a desirable thing.

So far as the Bureau of Reclamation is concerned, we have tried to present to you and we have presented to you in this budget request a rock-bottom estimate of our needs. In fact, I feel that in some places we may have cut ourselves a little more than is the economical rate of construction and investigations. This estimate represents the best judgment of our field engineers in my office to keep work moving without actually stopping work or issuing slowdown notices to our contractors.

I would like to point out that this 1958 request for a construction appropriation of $160,800,000, including the upper Colorado Basin fund, is worth only $59,555,000 in terms of 1940 dollar values. The purchase power of the dollar, as we know, has dropped in the last 25 years. This request is lower than the equivalent in appropriation in 12 of those last 25 years.

RECLAMATION DOLLAR VALUE ON 1940 BASE

I have a statement attached which shows the purchasing power of the dollar on reclamation construction for all years from 1930 through 1958, using 1940 as a base of unity. I think you will note in that table that in the last 5 years reclamation construction has actually leveled off, even though the dollar appropriations have increased, by 39 percent.

In other words, we are not getting as much work for our dollars as we were, and it is works that count in our program.

Chairman HAYDEN. Well, that is common to everything in the United States today. You are no exception. The dollar just does not buy as much, that is all there is to it. It is the higher cost of material and higher cost of labor and manufactures which has brought that about.

COST COMPARISON ON DAMS

Mr. DEXHEIMER. We have a comparison also of the costs of Glen Canyon Dam as compared with the Hoover Dam and powerplant built back in the thirties.

Chairman HAYDEN. The only compensating factor is that the benefits from reclamation likewise have increased. We do get more for these dollars than we used to get.

Mr. DEXHEIMER. That is certainly correct, and we get more return from reclamation too than we did, of course.

On that basis, you can see that what we actually should be having is a much greater increase in the reclamation program to do the same amount of work.

I would also like to say that in this comparison of Hoover and Glen Canyon, the cost per acre-foot of storage capacity in Glen Canyon will be less than the cost in the Hoover Dam, which was built in the depression years in the thirties, a cost of $2.55 per acre-foot in Glen Canyon, as compared with $2.87 for the Hoover Dam, and, of course, on the reduced-dollar basis. The cost of kilowatts will be greater for Glen Canyon because of somewhat small capacity. I think that reflects, however, the improvement that we have made in our designs, in our planning, and the improvements in the field of construction methods and machinery, which I believe shows we have a very good construction contract for the Glen Canyon powerplant and dam.

1958 REQUEST FOR INVESTIGATION FUNDS

We requested $5,932,000 for fiscal 1958 for general investigations. After allowance to cover the cost of civil-service retirement funds, this will permit us to continue at approximately the same level as during the current year. We believe that that amount represents the very minimum necessary to continue the Bureau's 1958 plan for long-range planning and development of water resources.

CONSTRUCTION AND REHABILITATION REQUESTS

The construction and rehabilitation request totals $135,658,000, there again including funds for retirement costs. This compares with an appropriation of $143,975,500 for the current year, a decrease in actual dollars as well as in the purchasing power of those dollars.

Our estimate includes funds for the initiation of construction on 3 regular projects and 3 units of the Missouri River Basin project, the Wapinitia and Crooked River projects in Oregon; the Little Wood River project in Idaho; the Ainsworth and Farwell units in Nebraska; and the Shoshone extension unit, which I mentioned previously, which we are not going to go ahead with at this time.

That would be a reduction from our request. We have an estimate of $7,700,000 under the loan program for irrigation districts for construction of distribution systems in connection with federally constructed projects, as provided in Public Law 130 of the 84th Congress.

Chairman HAYDEN. That type of construction does result in saving water; does it not?

Mr. DEXHEIMER. Any of these projects are designed as water-saving projects and water-utilization projects. About the only kind of project we get into is to develop and use the water more efficiently and save it from going to waste as it is doing in most of our river systems today.

Chairman HAYDEN. You may proceed with your statement.

UPPER COLORADO BASIN REQUEST

Mr. DEXHEIMER. The upper Colorado River Basin request is for $25,142,000. This is an increase of $11,734,000 over the amount appropriated for the current fiscal year after giving effect to civil-service retirement costs.

With that we would continue construction of Glen Canyon Dam in Arizona, Flaming Gorge in Utah, and the Navaho unit in New Mexico. We would also carry on advanced planning for the Curecanti unit in Colorado and on the other authorized participating projects.

OPERATION AND MAINTENANCE

On operation and maintenance our request is for $28,338,000, approximately the same amount as for the present fiscal year.

The general administrative expense estimate is $4,242,000, an increase of $78,000 over the amount appropirated for fiscal 1957 after adjustment for the civil-service retirement fund.

We need the full amount of all those requests, Mr. Chairman, and, except for the reduction that the House made in the O. and M request of $338,000 which is due to our ability, since we made this estimate, of being able to turn over a project to the water users for their own operation, we will not need those funds this year.

CIVIL-SERVICE RETIREMENT FUND

Chairman HAYDEN. With respect to this civil-service retirement fund, heretofore Congress appropriated that money directly to the Civil Service Commission?

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. Now we have adopted a policy of making each agency and branch of the Government take care of its civil-service retirement payments. That is required by law. Does that not have the effect of actually reducing the amount of money that you otherwise would have to expend?

Mr. DEXHEIMER. Theoretically, of course, we should be able to add that to our budget requests, but sometimes it seems to be the feeling that we should absorb that and just reduce our requests by that much. We think we should be able to add it so that it would increase our budget requests by the amount of the retirement-fund payments

Chairman HAYDEN. As far as the taxpayer is concerned it makes no difference whether the money is appropriated in a lump sum directly to the civil-service retirement fund or whether it is transferred from numerous appropriations. The results are the same. This is an obligation of the Federal Government, and of course it will be met.

RETIREMENT SHARE OF PROJECT COST REIMBURSABLE

Mr. DEXHEIMER. Mr. Chairman, in addition to that, under Bureau of Reclamation laws, at least the share of that money which is a project cost is charged to those projects and becomes reimbursable. The total retirement costs, amount to about 2 percent, and 90 percent of our money is reimbursable, so that now the water and power users of our projects are loaded with that additional cost rather than it being a burden on the taxpayer, which is a peculiar situation to the Bureau of Reclamation because we are required to return the money from our projects.

Chairman HAYDEN. I do not think that Congress in passing this new law intended to change the source of payment, but rather intended to change the method of payment. I do not think that the contribution to the civil-service retirement fund should be a reimbursable cost of the project.

You have raised a very important point, and one that should be looked into.

Mr. DEXHEIMER. I think the act that set up the retirement under that method of handling exempted only the Post Office Department from the return. Most agencies of Government, of course, are not required to return their money, but the Bureau of Reclamation is a peculiar organization that has to return its money to the Government, so that it does not become a burden on the taxpayer. Therefore, we are actually in effect doubled on the retirement fund. We have to seek the appropriation and then we have to return it.

Chairman HAYDEN. I think that that is worth looking into.

GENERAL INVESTIGATIONS

The budget estimate for "General investigations" is $5,932,000. The House committee recommended an allowance of $4,500,000—a reduction of $1,432,000. The Department is requesting restoration of the full budget estimate.

The justifications will be included in the record.

(The justifications referred to follow:)

GENERAL INVESTIGATIONS

Appropriation, fiscal year 1957	$5,680,000
Prior year balance available	[1] 107,393
Contributions	155,459
Total obligations, fiscal year 1957	5,942,852
Estimate of appropriation, fiscal year 1958	[2] 5,932,000
Contributions	26,000
Total obligations, fiscal year 1958	5,958,000

[1] Does not include $13,606 prior year balance of advance to Commissioner's office, Denver, Colo., and centralized project activities in regional offices, and $29,434 outside reimbursements.
[2] Includes $256,600 for contribution to the civil-service retirement fund.

DESCRIPTION

The appropriation for "General investigations" provides for the planning of the basin and project developments of the Bureau of Reclamation for the utilization of the water resources of the 17 Western States and the Territories of Alaska and Hawaii, except in the Missouri River Basin where investigations of potential developments are made with "Construction and rehabilitation" allotments.

The program of general investigations includes—

(1) Engineering and economic investigations to determine the feasibility of potential reclamation projects in the 17 Western States and, in fiscal year 1957, for providing technical assistance and guidance to the government of the Territory of Hawaii in developing the Molokai project in accordance with Public Law 634.

(2) Advance planning to prepare newly authorized projects for construction.

(3) Investigations of existing projects necessary for rehabilitation, financial adjustments, or water conservation.

(4) Investigations of water resource developments in the Territory of Alaska.

The general-investigations program also includes small allowances for necessary transfers of funds or reimbursements to other agencies, such as the Geological Survey, Fish and Wildlife Service, National Park Service, Weather Bureau, Coast and Geodetic Survey, Department of Agriculture, etc., for work over and above their regular programs which those agencies perform in connection with the Bureau's investigations of specific potential projects and which these other agencies are better equipped to do. Beginning in fiscal year 1958, however, funds for the activities of the Fish and Wildlife Service and the National Park Service in the upper Colorado River Basin wil be included in the requests of those agencies.

WORK UNDERWAY AND PROPOSED

The general investigation obligation program for the current fiscal year is $5,942,852 which is financed with appropriated funds in the amount of $5,787,393 and contributions of $155,459. With these funds, planning activities will be underway on a total of 113 investigations, exclusive of stream-gaging activities only. Of this total, 83 will be studies underway at the beginning of the fiscal year and 30 will be investigations being initiated or resumed; 38 of these investigations will be completed.

The estimated appropriation of $5,932,000 for general investigations for fiscal year 1958 includes $500,000 from the Colorado River development fund, for investigations in the Colorado River Basin as authorized by the Boulder Canyon Adjustment Act of 1940, to be provided annually from the revenues of the Boulder Canyon project as a special fund for the development of projects in the Colorado River Basin; $250,000 from the general fund of the Treasury for Alaskan investigations, and $5,182,000 from the reclamation fund.

The request of $5,932,000 for fiscal year 1958 plus contributions in the amount of $26,000 will be utilized for planning activities on a total of 93 investigations, of which 75 will be continuations of prior-year investigations and 18 will be initiation or resumption of new investigations. Of the total, 32 will be com-

pleted in fiscal year 1958. The activity breakdown on a cost-to-appropriation basis of work proposed in fiscal year 1958 compared with the program for fiscal year 1957 is shown in the following "Summary of activities," and the details of the program proposed is presented in the accompanying tabulation entitled "Schedule of General Investigations Program, Fiscal Years 1957 and 1958."

Summary by activities

Activity	Total estimated cost	Total, June 30, 1956	Program, fiscal year 1957	Program, fiscal year 1958	Balance to complete
Engineering and economic investigations	$60,915,095	$22,206,447	$5,506,483	$5,411,120	$27,791,045
Advance planning	8,039,963	1,676,871	479,957	177,780	5,705,355
Investigation of existing projects	1,334,940	966,719	96,094	125,800	146,327
Alaskan investigations	2,829,993	208,055	205,738	250,000	2,166,200
Total cost to appropriation	73,119,991	25,058,092	6,288,272	5,964,700	35,808,927
Distributive costs: Service facilities, unliquidated obligations, etc			−345,420	−6,700	
Total obligation program			5,942,852	5,958,000	
Less: Unobligated carryover and funds advanced			[1] −262,852	−26,000	
Appropriation or estimate			5,680,000	5,932,000	

[1] Does not include $13,606 prior-year balance of advances to Commissioner's office, Denver, Colo., and centralized project activities in the regional offices, and $29,434 outside reimbursements.

ENGINEERING AND ECONOMIC INVESTIGATIONS

Detail by activity

Subactivity	Total estimated cost	Total to June 30, 1956	Program, fiscal year 1957	Program, fiscal year 1958	Balance to complete
Reconnaissance	$1,927,011	$609,982	$280,058	$322,310	$714,661
Basin surveys	12,206,798	7,304,357	903,432	992,600	3,006,409
Project investigations	44,589,621	13,133,953	4,136,315	3,946,110	23,373,243
General engineering and research	2,191,665	1,158,155	186,678	150,100	696,732
Total cost to appropriation	60,915,095	22,206,447	5,506,483	5,411,120	27,791,045

Reconnaissance.—The cost to appropriation program for fiscal year 1957 for this activity is $280,058. This program will provide for reconnaissance survey work on 13 potential projects to develop preliminary plans and ascertain the advisability of making more detailed feasibility studies. Of these, 11 studies are to be completed. The major item is the continuation of the reconnaissance study of the East Side Division of the Central Valley project where the increasing demands for new developments and the complicated water exchange problems involved in making full use of this natural resource necessitates an overall evaluation of the area.

In fiscal year 1958, the cost to appropriation program will be $322,310, including $14,500 for contribution to the civil-service retirement fund. This will permit the continuation of work on the 2 studies underway but not completed in prior year and initiation of 6 additional studies. Of these, five will be completed. The major item of work will be the study of the East Side Division which will be completed by the end of the year. The increase of the fiscal year 1958 program over the fiscal year 1957 program is primarily attributable to the need for additional reconnaissance surveys in the Columbia River Basin where there are pressing demands for expansion of irrigation opportunities and to the inclusion for the first time of funds for contribution to the civil-service retirement fund as required by Public Law 854.

Basin surveys.—The fiscal year 1957 cost to appropriation program for basin surveys is $903,432, and the estimated cost to appropriation program for fiscal year 1958 is $992,600, including $40,300 for contribution to the civil-service retirement fund. The funds for fiscal year 1957 will be utilized to continue planning work on 10 basin surveys underway at the beginning of the fiscal year, to initiate

comprehensive planning in the Kootenai River Basin in Montana-Idaho and to resume a small program of overall planning in the upper Colorado River Basin. Of these, two will be completed during the fiscal year. In fiscal year 1958, the program will provide for further planning of the 10 investigations underway in the prior year. Of these, one study will be completed by the end of the fiscal year. The increase in the fiscal year 1958 program over that for fiscal year 1957 is due to including funds for the first time for contribution to the civil-service retirement fund and to provide for a more adequate program in the upper and middle Snake River Basin, where many of the streams are overappropriated in dry years. Before there can be any significant increase in irrigation in the basin, an overall evaluation should be made of the water supply and potential projects to insure optimum development. The basin study should be completed as soon as possible so as to not unduly delay further irrigation in the basin.

It is important that these basin surveys proceed as expeditiously as possible They should be made before project investigations are undertaken to insure that water-resources development proceeds under a comprehensive plan that provides for optimum use. Completion of basin surveys for all major basins in the West is an important goal to provide a uniform basis for project selection.

Project investigations.—The cost to appropriation program for fiscal year 1957 for project investigations is $4,136,315 and that for fiscal year 1958 is $3,946,110, including $176,800 for contribution to the civil-service retirement fund. In fiscal year 1957, the program will provide for continuation of work on 47 studies underway at the beginning of the fiscal year and to initiate or resume 17 other studies of potential projects, a total of 64. Of these, about 15 will b ecompleted. In fiscal year 1958, the program provides for additional planning on the 49 project investigations not completed in the prior year and on 11 which are to be initiated or resumed, a total of 60. Of these, some 21 investigations will be completed.

The project investigation activity is the most important element in the entire general investigation program as these studies culminate in final plans which serve as a basis for recommendations of the Congress as to authorization. Inasmuch as the fiscal year 1958 program includes for the first time funds for contribution to the civil-service contribution fund, it therefore represents a significant decrease from that for fiscal year 1957. In both fiscal year 1957 and fiscal year 1958, the work has been concentrated insofar as practicable in completing work now underway and the limited number of new investigations have been selected with care to utilize the limited funds on projects with the greatest potential and, especially where privately held lands are involved, good local support. In recognition of the widespread need for supplemental water arising from the serious drought now being experienced throughout most of the West, a major portion of the potential projects to be studied during this period involve providing additional water in areas where crop production is now suffering from inadequate supplies. In order to keep pace with the construction program and to maintain an orderly flow of reports to Congress, the full amount of the fiscal year 1958 funds for these studies will be required.

General engineering and research.—The fiscal year 1957 cost to appropriation program for general engineering and research is $186,678 and the estimate for fiscal year 1958 is $150,100 including $6,100 for contribution to the civil-service retirement fund. It is highly essential that the General Engineering and Research investigations of the technical problems of reclamation be continued. These studies are urgently needed because the easily developed reclamation projects have long since been completed, largely by private capital. The remaining potential developments generally involve large and complex undertakings presenting more severe requirements on planning, design and construction, and operation than those of the past, to such extent that the limit of available basic technical knowledge has been approached. For further safe and economical planning and construction this knowledge must be extended by basic engineering research on the more difficult problems.

Advance planning

	Total estimated cost	Total to June 30, 1956	Program, fiscal year 1957	Program, fiscal year 1958	Balance to complete
Total cost, advance planning	$8,039,913	$1,676,871	$479,957	$177,780	$5,705,355

During fiscal year 1957 the cost to appropriation program of $479,957 will provide for advance planning activities on five authorized projects for which construction funds have not yet been made available and for transfer of funds to the National Park Service and Fish and Wildlife Service for activities by these agencies under section 8 of Public Law 485 authorizing the Colorado River storage project and participating projects. Of the 5 studies underway, 3 will be completed by the end of the fiscal year. In fiscal year 1958 a cost to appropriation program of $177,780 which includes $7,500 for contribution to the civil-service retirement fund, will provide for completion of the detailed advance planning studies on the initial phase of the Washoe project in anticipation of start of construction in fiscal year 1959 and for a small amount of work on the Santa Margarita project in California.

Investigations of existing projects

	Total estimated cost	Total to June 30, 1955	Program, fiscal year 1956	Program fiscal year 1957	Balance to complete
Total cost, investigations of existing projects	$1,334,940	$966,719	$96,094	$125,800	$146,327

The fiscal year 1957 cost to appropriation program for investigations of existing projects is $96,094 and the fiscal year 1958 estimate is $125,800 including $6,800 for contribution to the civil service retirement fund. The increase is required to maintain a more efficient program on the water-conservation studies on the Rio Grande project in Texas where the water-supply problem has become critical. These rehabilitation surveys and financial adjustment studies are made on existing Federal reclamation projects to plan for their physical and financial rehabilitation and betterment. This program should not be curtailed as these studies are required to protect the interests of the Government and its investment in reclamation projects by making plans to keep these projects in good operating condition.

Alaskan investigations

	Total estimated cost	Total to June 30, 1956	Program, fiscal year 1957	Program, fiscal year 1958	Balance to complete
Total cost, Alaskan investigations	$2,829,993	$208,055	$205,738	$250,000	$2,166,200

During fiscal year 1957 a cost to appropriation program of $205,738 will provide for collection of additional water supply data on the Caribou project, a 30,000-kilowatt hydroelectric development 59 miles east of Palmer which would be interconnected with the existing Eklutna project system to meet the expanding loads in this area, and to continue studies of the 230,000-kilowatt Devil Canyon project on the Susitna River which will serve the growing rail belt area. Limited cooperative studies will also be underway with the Alaska Experiment Station in connection with the Matanuska Valley project and a small amount of funds will be used for important stream-gaging work to augment the very sketchy streamflow data now available. For fiscal year 1958, the cost to appropriation program of $250,000 (including $3,600 for contribution to the civl service retirement fund) will be used to complete the Caribou project study and to continue the study of the Devil Canyon project. The cooperative studies with the Alaska Experiment Station and the stream-gaging program also will be continued.

Alaska's population during the last decade has grown quite rapidly and with such population growth there are insufficient homes, schools, commercial establishments, public utility services, and service industries. Electric services are limited, and many dwellers in the suburban rural areas are unable to obtain electric service. Until substantial blocks of low-cost energy are made available, most of Alaska will suffer the inconvenience of relative curtailment in electric power supply. For the same reason, industrial expansion of the Territory is severely handicapped for need of electrical energy.

There is at the present time almost unlimited opportunity for low-cost hydroelectric power developments in the Territory but little factual information is available. It is important that investigations be continued, since these investigations will contribute materially toward permanent settlement, encourage industrial development, and accelerate use and aid in the development of other Alaskan natural resources.

An expansion of the Alaskan investigation program is essential not only to permit a program more commensurate with the great needs of the area but also to provide for more efficient planning operations. A sizable portion of the funds now available are required for overhead office costs such as salaries, rent, utilities, supplies, etc., which are not susceptible to a proportionate reduction when funds are curtailed, and the funds that are available for actual field studies are inadequate. The request for fiscal year 1958 represents a minimum request if an efficient and effective program is to be maintained in the Territory of Alaska.

NEED FOR INVESTIGATIONS

The population of the United States has grown at a much faster rate than was anticipated several years ago, particularly in the 17 Western States where the growth has been considerably greater than for the rest of the Nation. This has created a pressing demand for expansion of the irrigated farmland to support the additional population. The President's Water Resources Policy Commission (1950) estimated that this country faces the need for about 100 million new acres of average nonirrigated cropland, or the equivalent in agricultural production through improved farming technique, irrigation, etc., by 1975 to provide the food and fiber which will be required by the increase in population. The seriousness of this situation was recently highlighted by Mr. D. A. Williams, National Administrator of the Soil Conservation Service, who warned that the Nation is steadily losing tillable land and will inevitably feel the pressure in the not-too-distant future of too few acres of farmland and too many people. Mr. Williams pointed out that the Nation is annually losing some 1 million acres of land to such modern developments as highways, airports, and urban expansion. For instance, it has been estimated that the recently authorized public highway program will take nearly 4 million acres out of production in the next 15 years. This loss, coupled with a yearly loss of about 400,000 acres to the ravages of erosion and alkalinity, totals an annual deficit of nearly 1½ million acres. While new acreage is being continually placed in production, the land available for cultivated crops has remained relatively constant since 1920 despite an expanding population and improved dietary habits.

Based on present authorizations and future plans for water resource developments, it has been estimated that it may be possible to bring in the neighborhood of 6 million acres of new irrigated cropland into production by 1975. Since the yield from irrigated croplands is on the average 50 percent greater than for nonirrigated land, this is equivalent to some 9 million acres of average nonirrigated cropland, which is comparatively small in relation to the expected needs by 1975 but extremely important.

The same general situation exists in the case of hydroelectric power, the hydrologic twin of irrigation in multipurpose water resource developments. Not too many years ago, many questioned the wisdom of constructing the Boulder Canyon and Grand Coulee powerplants on the basis that there would not be sufficient demand for the power. The output from these hydroeletric giants has long since been absorbed and there is a pressing need throughout the West for additional power developments to meet the demands generated by industrial growth of the area and by increased use of power for irrigation pumping. For instance, in the Lakontan, Bonneville, and upper Colorado River Basin, the pinch of an inadequate power supply for domestic and commercial purposes is already being felt. Already many industrial companies have expressed reluctance toward establishing factories and plants in the area because they have no assurance of an adequate supply of power. Under the most optimistic plans of the Bureau for this area it is estimated that a serious shortage of power will exist in 1970 between anticipated peak demands and net assured capacity.

Municipal and industrial water is also a serious problem in many areas because of the expanding population and the accompanying industrial growth. Many cities in the West, particularly in the Great Plains area, are facing arrested economics growth and others will be facing it in the very near future.

It is readily evident that every effort must be made to fully utilize to the

best advantage the vital water resources of the West. It was also evident that if the Nation's present standard of living is to be maintained, let alone improve, the water resources development program must be carried forward as expeditiously as possible. Most of the undeveloped projects present complex engineering problems that require careful and sometimes extensive planning to insure their success and the wisest use of the limited water supply. As a result, there is generally a lag of several years between the initiations of planning and the authorization and construction of the project. It is, therefore, essential that the planning program of the Bureau be reviewed in the light of the Nation's need in the future and that a planning program commensurate with those needs be maintained. The program for fiscal year 1958 has been carefully formulated with those objectives in mind and to insure the maximum return on every dollar invested in that activity while at the same time keeping in mind the need to hold the Federal expenditures to a minimum. The fiscal year 1958 request represents a minimum planning program if the Bureau of Reclamation, which is the Federal agency having primary responsibility for water resource developments in the West, is to continue to carry out its responsibilities.

Another important factor in the formulation of this program is the need for a stable planning activity. The appropriations for this activity have been characterized by wide fluctuations in the yearly amounts which have seriously impaired the efficiency of the Bureau's planning activities. Since the major portion of the planning funds is for personal services, the size of the planning staff has varied in almost direct proportion to the annual appropriations. On a number of occasions the planning organization has been badly disrupted by major reductions in funds with the result that many valuable employees with as many as 25 to 30 years of experience with the Bureau have been lost. With a subsequent increase in funds, it has been necessary to recruit and train replacements—an expensive and inefficient process. Under these conditions, the planning activity has been carried forward on a year-to-year basis rather than geared to a long-range program. A stable program would contribute immeasurably toward efficient operations.

Schedule of general investigations program, fiscal years 1957 and 1958

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ENGINEERING AND ECONOMIC INVESTIGATIONS						
(a) *Reconnaissance*						
Region 1:						
Challis project	Idaho	$48,000		$31,740		Reconnaissance investigation scheduled for fiscal year 1958 to determine advisability of making feasibility study to furnish late-season supplemental irrigation water to some 3,000 acres of land, provide a full supply to about 1,400 acres, and provide power-production facilities for irrigation pumping, and for revenue to assist in repaying project. Programing of a feasibility study dependent upon findings of reconnaissance.
Salmon Falls Creek project	do	53,000		38,000	$3,619	Extreme water shortages suffered by area for many years forced reduction of project from 150,000 acres in 1906 to present 35,000 acres. Supply in 1954 and 1955 only 0.45 and 0.58 acre-feet per acre, respectively. In 1955 only 12,000 acres actually cropped. Study needed to explore possibilities of a source of supplemental water.
The Dalles project, eastern division.	Oregon	25,000		25,000		Reconnaissance investigation scheduled to be made in fiscal year 1958 to determine if further studies of some 6,000 acres of irrigable land in the vicinity of The Dalles, Oreg., merit further study.
Umpqua River Basin project, Olalla division.	do	25,000		25,000		Reconnaissance investigation scheduled to start in fiscal year 1958 to determine if further studies of plans to serve some 9,000 acres are warranted.
Region 2: Central Valley project, east side division.	California	350,000	$148,875	150,000		This investigation is planned for the purpose of determining supplemental needs and sources of water supply for approximately 4,000,000 acres on the east side of San Joaquin Valley. A possible program for water-supply development will be suggested in a report scheduled for publication upon completion of the investigation at the end of fiscal year 1958. Requests for water service from the presently constructed features for east side San Joaquin Valley exceed present capacities. Because of water-exchange problems involved in fully utilizing the available water supply, an overall evaluation is essential. This study will be sufficiently advanced by the end of fiscal year 1957 that preliminary planning on some of the individual projects within this division will be initiated in fiscal year 1958 under project investigations.
Region 3: Lower Colorado River Basin, new areas.	Nevada, Arizona, and California.	370,000	20,000	20,000	265,549	Reconnaissance study of areas in the lower Colorado River Basin which show possibilities of being developed into irrigation projects. Those found worthy of more detailed study will be scheduled as project investigations in later years.
Region 4: Fontenelle project	Wyoming	12,000		5,404	5,000	Reconnaissance of potential project to provide for irrigation of new lands and supplemental water should be undertaken to determine

Region 4: Fontenelle project	Wyoming	12,000		5,404	5,000	Reconnaissance of potential project to provide for irrigation of new lands and supplemental water should be undertaken to determine if project investigations are warranted and to assist State of Wyoming in selection of projects to use its allotted share of Colorado River water.
Region 5:						
Mora project	New Mexico	55,164	$5,000	5,000	25,000	Reconnaissance study of private irrigation developmend badly in need of supplemental storage to maintain some 18,000 acres in production and rehabilitation of deteriorated facilities. A reconnaissance report was completed in fiscal year 1956, which did not present conclusive findings. A 5- to 7-year hydrologic data collection program, needed to obtain the data on which to base firm conclusions, was initiated in June 1956.
Porum project	Oklahoma	8,000		8,000		Investigation of a potential irrigation project to utilize streamflows regulated by the Corps of Engineers' authorized Eufala Dam in the east central part of Oklahoma in the Canadian River Valley. A reconnaissance report is scheduled for completion in fiscal year 1958.
Contribution to civil service retirement fund.		46,000		14,500	31,500	Additional fund requirement for Public Law 854.
Subtotal, reconnaissance costs.		1,929,991	281,428	322,644	715,937	
Cost adjustment		−2,980	−1,370	−334	−1,276	Applicable portion of transfers, credits, and other expenditures to reconcile costs to appropriations.
Subtotal, reconnaissance cost to appropriations and contributions.		1,927,011	280,058	322,310	714,661	
(b) Basin surveys						
Region 1:						
Clark Fork Basin	Montana and Idaho	279,000	54,727	76,001	5,450	The Clark Fork River is one of the larger tributaries of the Columbia River, having large, undeveloped, storage and power potentialities. In addition, the basin includes large areas of potentially irrigable land, as well as areas in need of supplemental water supplies. A basin-wide study and report should be continued to inventory the land and water resources and present a pattern for logical development. The investigation also will delineate areas for detailed studies where feasible developments appear possible in the near future. The present urgent need for additional power and storage in the Pacific Northwest gives the study of upstream storage possibilities added significance. A basin report is scheduled for completion in fiscal year 1959.
Columbia River Basin	Idaho, Wyoming, Utah, Washington, Oregon, Montana, and Nevada.	1,433,800	42,000	68,800	287,244	Funds are required for Columbia River Basin studies for comprehensive plans, particularly for power and flood control, for important Army and Reclamation dams in operation and under construction or authorized, and in connection with Reclamation's responsibilities stemming from the Army-Interior agreement or comprehensive development of the Columbia River Basin, and also participation in the coordination and planning of the Columbia Basin Interagency Committee.

93520—57——13

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued						
(*b*) *Basin surveys*—Continued						
Region—Continued						
Kootenai River Basin	Montana and Idaho	$60,000	$12,000	$39,000	$7,783	Investigation initiated in fiscal year 1957 to develop an irrigation plan to fit into an overall comprehensive plan of development for the basin, and to fit the plans of the United States in with those of Canada in an international plan of development, studies for which are now underway.
Upper and middle Snake River Basin.	Idaho, Oregon, and Wyoming.	1,000,000	274,541	378,089	319,581	Investigation in progress. The purpose of this investigation is to evaluate the underdeveloped land and water supply potential of the upper Snake River Basin upstream from and including the Powder River, and arrive at a comprehensive multipurpose development plan. The amount and distribution of water supply available for irrigation of new lands and as a supplemental supply for the lands that are now inadequately irrigated will be covered. Domestic supplies, flood control, power production, and other multipurpose uses and the integrated use of new facilities with reservoirs already in operation will be studied. The study will cover all tributary streams on the north of the basin that disappear into the basalt flows of the Snake plain. Ground-water reservoirs of the basin are another source of additional water supply to be considered. Use of land and water resources in the basin is already developed in large measure. Formulation of future development plans must be incorporated into a basin wide plan in order to assure that future expansion is orderly and makes full and reasonable use of the resources and serves multiple purposes involved.
Umpqua River Basin	Oregon	81,000	23,000	3,580	3,651	Studies underway. This western Oregon area has increased quite spectacularly in population in the past decade and seems to have outstripped resource development. Local interest has been evident over the past few years for irrigation development, power generation, and flood control. A special report evaluating the basin potential was completed in fiscal year 1956. This report was presented to the people of the area early in fiscal year 1957 in order that they might better determine the course of further investigations. Studies in the future will be concentrated on specific areas where there is strong local interest in early development. The funds for fiscal year 1958 and thereafter will provide for stream gaging by the USGS.
Region 2:						

Region 2: Central Valley Basin	California	1,300,000	125,045	100,000	178,469	Investigation in progress of engineering, agricultural, and economic factors relating to S. Doc. 113, 81st Cong., 1st sess., entitled "Comprehensive Plan for Water Resources Development, Central Valley Basin, Calif." Coordinated reservoir-operation studies are being made and economic studies kept up to date. In fiscal year 1957 a revision of the report will be initiated which, when completed as planned in fiscal year 1961, will reflect changes since S. Doc. 113 was completed in 1945. Studies of salinity conditions in the delta area of the lower Sacramento River will be carried on.
Lower Klamath River and adjacent basins.	do	642,000	131,209	125,000	106,000	Investigation in progress, to inventory the natural resources and prepare plan for their orderly development in the north coastal area of California, which contributes approximately 36 percent of the water supply of the State of California. A report is scheduled for publication in fiscal year 1960. Fiscal years 1957 and 1958 programs include $40,000 each for transfer to the Fish and Wildlife Service for studies by that agency of the fish and wildlife aspect of the basin development.
Santa Ynez River Basin	do	78,192	3,000	3,000	1,500	Report was completed in fiscal year 1956. A cooperative study of consumptive use and rainfall penetration in the Santa Ynez River Basin is being carried on with Geological Survey, Soil Conservation Service, Bureau of Reclamation, and Santa Barbara County Water Agency participating. The study is needed to develop data for ground water estimates.
Upper Klamath River Basin	Oregon and California.	664,023	15,000	10,000		The proposed basin report was completed in fiscal year 1955 but completion of the final report was delayed pending consummation of an inter-State compact between California and Oregon. These funds are required to service correspondence, carry on special operational and water rights studies and for processing the final report.
Region 3: Lower Colorado River Basin, general.	California, Nevada, New Mexico, Utah, and Arizona.	1,064,300	76,900	60,000	227,347	Comprehensive water supply studies, including sedimentation and water resources studies of the lower Colorado River Basin, are in progress to develop basic data needed for general planning and for a factual basis for examination of controversial issues arising from the Colorado River compact. Also includes examination of Bureau's need for withdrawn lands and their release from withdrawal when no longer needed.
Region 4: Upper Colorado River Basin.		1,700,000	10,000	10.000	313,216	Reestablished to cover work of a general nature not applicable to a specific project such as consumptive use, stream forecasting, sedimentation, evaporation, and others.
Region 5: Pecos River Basin	New Mexico and Texas.	553,376	125,000	76,000	44,000	Investigation now under way to establish a basin plan for optimum utilization of a very limited water supply which is being further depleted by increasing demands for water, nonbeneficial consumption along the river, and high channel losses. Report is to be completed in fiscal year 1959.
Miscellaneous services: Print basin survey reports.		28,000		3,000	25,000	Funds are required for printing of basin reports. Such costs are chargeable to the specific basins but are not scheduled with the basin survey costs since it is impossible to predict just when or what reports will be cleared in the review by States, Federal agencies, and the Congress, for printing.

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued						
(b) *Basin surveys*—Continued						
Contribution to civil service retirement fund.		$162,000		$40,300	$121,700	Additional fund requirement for Public Law 854.
Subtotal, basin surveys costs		11,965,391	$917,422	992,770	3,009,476	
Cost adjustments		241,407	−13,990	−170	−3,067	Applicable portion of transfers, credits, and other expenditures to reconcile costs to appropriations.
Subtotal, basin survey costs to appropriations		12,206,798	903,432	992,600	3,006,409	
(c) *Project investigations*						
Region 1:						
Baker project—upper division	Oregon	288,000	29,000	22,303	4,000	An information report on providing supplemental water for 19,800 acres was issued in fiscal year 1954 for use by the people of the area that they might determine a course of action. Their action culminated in a bill seeking authorization. In an attempt to form an irrigation district the original area of the project has undergone a change which will require additional studies. A revised feasibility report is scheduled for completion in fiscal year 1959.
Blackfoot River project	Montana	100,000	65,580	6,043		Continuing investigation of the feasibility of providing a multipurpose dam and reservoir at the Ninemile site on the Blackfoot River. The powerplant would have an installed capacity of about 75,000 kilowatts and the reservoir would provide important upstream storage of about 960,000 acre-feet. A feasibility report is scheduled in fiscal year 1958.
Chief Joseph Dam project	Washington	409,000	171,780	110,534	88,022	Public Law 577 passed in 1952 reauthorized the Chief Joseph Dam project to include irrigation among its multiple purposes. Construction of this dam is now nearing completion. Several areas in the vicinity of the dams have an irrigation potential that should be studied. In fiscal year 1956 studies on the Greater Wenatchee division were completed. Studies were started in fiscal year 1956 on the Okanogan-Similkameen division, Oroville-Tonasket unit, to develop a plan for serving irrigation water to about 800 acres of new land and providing supplemental water to about 10,000 acres.

						A report on this division will be completed in fiscal year 1958. In fiscal year 1957 studies of the Chelan division to serve about 2,000 acres of new land and 1,800 acres of presently irrigated land and the Alameda unit of the shoreline pumping division to serve about 2,500 acres of new land were started. The report on the Alameda unit will be completed in fiscal year 1958 and the report on the Chelan division completed early in fiscal year 1959. During fiscal year 1958 a reconnaissance of the St. Andrews-Sagebrush Flats area is scheduled to determine if the area merits further feasibility studies. Also, a feasibility study of the Whitestone Coulee unit, Okanogan-Similkameen division, is scheduled to start to provide a plan to furnish supplemental irrigation water to about 2,500 acres of land in need of additional water. In fiscal year 1959 the investigation of the Metow division is scheduled to start to provide a plan for the development of an adequate water supply to some 13,000 acres of land.
Cottage Grove project	Oregon	106,000	45,000	41,000	16,962	Investigation started in fiscal year 1957 to determine best possible means of providing a full water supply to some 8,700 acres of new land. Irrigation water would be obtained from storage reservoirs constructed by the Corps of Engineers. Feasibility report scheduled for fiscal year 1959.
Dayton project	Washington	105,000	18,073	530		Investigations in progress on plans to provide supplemental irrigation water to about 1,500 acres of land and a full supply of irrigation water to 7,500 acres of new land. Report scheduled for completion in fiscal year 1957. Collection of steamflow records only work scheduled in fiscal year 1958.
East Long Tom project	Oregon	66,000	30,500	1,449		Studies started in fiscal year 1955 to determine plan for providing a water supply for about 13,650 acres of land when drier-than-average summers have curtailed crop production. Water would be obtained from the existing Fern Ridge Reservoir. Report scheduled for completion in fiscal year 1958.
Flathead River project	Montana	147,000	61,391	61,800	7,493	Investigation of multiple-purpose project involving diversion of Middle Fork to South Fork Flathead River behind Hungry Horse Dam was initiated in fiscal year 1957. Reconnaissance-type study will be made during fiscal year 1957, and feasibility studies are scheduled to start in fiscal year 1958 on dam site by reconnaissance during fiscal year 1957. House Document 531 has placed this project on list of projects which should be studied further.
Mann Creek project	Idaho	109,000	26,558	1,662		Investigation started in fiscal year 1956 to develop plans to provide a firm water supply to about 5,100 acres of land now badly in need of late season irrigation. Funds requested will provide continuance of studies and completion of feasibility report in fiscal year 1958.
McNary project, Plymouth division.	Washington and Oregon	72,000	54,170	12,500	853	Reconnaissance of area made. Feasibility studies started in fiscal year 1957 to provide a plan for the development of 3,000 acres of dry land. Water would be obtained by pumping from the pool of McNary Dam. Report scheduled for completion in July 1958.
Molalla project	Oregon	114,000	30,700	56,000	22,683	Investigation to develop plan for the irrigation of some 41,000 acres of new land started in fiscal year 1957. Area is in need of late summer irrigation water to insure maximum yield from the land. Water would be obtained by storage on the Molalla River.

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued						
(c) *Project investigations*—Con.						
Region 1—Continued						
Pendleton project	Oregon	$325,000	$14,000	$52,000	$6,576	A report presenting several development possibilities was completed in fiscal year 1954, and made available to the people for consideration. Local interest has centered on possibilities of a plan to develop the Teel and Stanfield areas. Additional studies started in fiscal year 1957 to delineate new project area and provide a plan for its development. A report is scheduled for fiscal year 1959.
Post project	do	125,000		56,000	33,647	Investigation scheduled to be resumed in fiscal year 1958 to provide plans for development of 6,500 acres of new land.
Rogue River Basin project	do	711,000	99,953	10,346	169,963	Rogue River Basin report completed in 1950 but because other agencies had not completed their analysis, was used only as a reference for subsequent studies. In 1952 agreement was reached on acceptable projects in the basin for which feasibility investigations were requested. Report on Talent Division was completed in fiscal year 1954 and authorized in fiscal year 1955; work on Illinois Valley Division was completed in fiscal year 1956 and a preliminary report prepared on a plan for the development of 16,600 acres of new land. Work on the Merlin Division was deferred in fiscal year 1954 but was resumed again in fiscal year 1956 to provide 10,000 acres of new land and 360 acres of irrigated land with a full supply of irrigation water. A report on this division will be completed in fiscal year 1958. A study of the Agate Dam and Reservoir as a potential source of needed supplemental water for about 4,830 acres of the Rogue River Irrigation District was started in fiscal year 1956, and the report is scheduled for completion in July 1957. In conjunction with the Agaga Dam and Reservoir investigation, a study will be made for the Rogue River Irrigation District for rehabilitation of parts of their existing distribution system which is in urgent need of repair and/or replacement, and which was not covered by the rehabilitation program for the Medford and Rogue River Irrigation Districts authorized in fiscal year 1956. During the spring of fiscal year 1956, in response to instructions from the Secretary of the Interior, the Bureau of Reclamation, Fish and Wildlife Service, and National Park Service cooperated in a reanalysis of the basin. A report, coordinated by the chairman of the Pacific Northwest Field Committee, was prepared in June 1956. During fiscal year 1957 additional data will be prepared for

						1956. During fiscal year 1957 additional data will be prepared for use in a supplement to the June 1956 report. Work on remaining divisions (Applegate Valley and Evans Valley) scheduled for future years.
Snake Narrows project	Idaho–Wyoming	172,000	42,400	26,500	760	Study of multiple-purpose project in progress. A report scheduled for completion in fiscal year 1959 will provide a plan for additional storage and production of 180,000 kilowatts of power which is in great demand in the Upper Snake River Basin. Storage space in Palisades Reservoir has been oversubscribed and the present and anticipated power requirements exceed the capacity of existing facilities.
Snake River project	Idaho and Oregon	1,031,000	281,480	264,666	357,509	Investigation initiated late in fiscal year 1953 to determine feasibility of using ground water in exchange for Boise River water for the Mountain Home Division. In fiscal year 1954 a report on the Hillcrest Unit as an initial phase of this development was completed. Report on the overall alternative plan was completed in fiscal year 1955. Studies of another proposal involving a dam on the Snake River at the Guffey site were initiated in fiscal year 1955 culminating in a reconnaissance-type report early in fiscal year 1956. Feasibility studies have continued on a plan to provide a full irrigation supply to some 130,800 acres of dry land and for the generation of 90,000 kilowatts of electrical energy. Irrigation water would be supplied from storage on the Snake River. This storage would be utilized to serve new lands of the Dry Lake area and provide an exchange supply of water to the existing Boise project for water diverted from the Boise River. A feasibility report is scheduled for completion in fiscal year 1959. In fiscal year 1958 a feasibility study of the Garden Valley Division is scheduled to start. This multiple-purpose project would provide critically needed upstream storage, provide for the ultimate production of 217,500 kilowatts of power and provide irrigation water which could be used for possible expansion of the irrigation system of the Fayette Division of the Boise project. In fiscal year 1959 an investigation is scheduled to provide a plan for the development of some 88,000 acres of new land on the initial Buttes Unit.
The Dalles project	Oregon	232,000	.....	50,000	91,550	A report was completed in 1947 for the western division, which was one of the recommended projects in H. Doc. 473, 81st Cong., 2d sess., the Columbia River. The area, mainly in cherry orchards, has suffered critical frost damage primarily because of the lack of irrigation water as evidenced by frost damage to at least 85 percent of nonirrigated trees against no damage to trees that received early spring irrigation during the extremely severe winter of 1955–56. An investigation of the project is scheduled to start in fiscal year 1958 to revise, adjust, and otherwise bring up to date the previous report to provide a plan for an adequate irrigation apply to some 4,500 acres of land. The revised report is scheduled for completion in fiscal year 1959. In fiscal year 1960, an investigation will be started of the feasibility of developing about 6,000 acres in the eastern division.

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued						
(c) *Project investigations*—Con.						
Region 1—Continued						
Upper Owyhee project	Oregon	$140,000	$47,860	$8,311		Investigation in progress to provide a plan for critically needed additional storage on the upper Owyhee River to supplement existing storage, provide needed flood control, and possibly generate power for downstream pumping plants. Report is scheduled for completion in fiscal year 1958.
Vale project, Bully Creek extension.	do	112,000	21,000	1,526		A feasibility report was completed in fiscal year 1949, as a supplement to the Columbia River Basin report. A critical water shortage on the Vale project, Oregon, has caused the water users of the Vale Irrigation District to make a determined effort to obtain additional storage. They have also expressed willingness to enter into a repayment obligation for $1 per acre annually. Surplus flows of Bully Creek and the Malheur River would be stored on Bully Creek for use as a supplemental supply to some 32,000 acres. Funds are reported to revise plans, incorporate additional information, and prepare a feasibility report to current standards.
Yakima project, Kennewick Division, deferred area.	Washington	25,000	10,000	15,000		Investigation started in fiscal year 1957 to provide a plan to furnish an adequate water supply to 6,721 acres of dry land which was deferred from the area now under construction in the Kennewick division. The large population growth of the area, need for additional land, and the now apparent feasibility of this area make it advisable to provide a plan for its development. Feasibility report scheduled for completion in fiscal year 1958.
Investigations on which stream gaging is only work scheduled during fiscal year 1957 through fiscal year 1960.		1,089,000	7,620	7,620	$732,071	The collection of water supply data by the Geological Survey is the only work scheduled during fiscal year 1957 and fiscal year 1958 on 9 projects (Butter Creek, Oreg.; Lolo Creek, Mont.; Walla Walla, Wash.; Lemhi Valley, Birch Creek, Bruneau River, and Raft River, Idaho; Medford division, Rogue River Basin project, Oreg.; and Yamhill, Oreg.). Feasibility studies are scheduled for future years.
Region 2:						
Calleguas project	California	379,987	224,234	24,300		Continuing investigation to determine feasibility of providing full supply for 50,000 acres and supplemental supply for 28,000 acres in the Calleguas Municipal Water District. Financial participation in the study of the water district exemplifies the interest of the local people. A report is scheduled for the end of fiscal year 1957.

Central Valley project (ultimate):						
Auburn unit	do	600,000	155,000	200,000	180,052	Investigation to determine possibilities of providing irrigation water for 135,000 acres presently having a partial water supply from ground water and other sources, municipal water for various cities in the vicinity, power for the rapidly expanding northern California market area and for project pumping needs, and supplemental flood control on the American River. A report is scheduled for fiscal year 1960.
Folsom south unit extension.	do	160,000	89,522	42,700		A study of engineering and economic feasibility of conveying Folsom Reservoir water to some 230,000 acres in San Joaquin County, pursuant to instruction of the Congress in Public Law 356, 81st Cong. A report is scheduled for publication at the end of fiscal year 1958.
Fresno-Chowchilla division.	do	175,000		55,000	120,000	Investigation to explore means of coordinating the operation of the prospective Buchanan Reservoir on the Chowchilla River, Hidden Reservoir on the upper Fresno River and the Madera Canal of the Central Valley project to provide additional water for some 70,000 acres of land in the Chowchilla area. A report is cheduled for publication in fiscal year 1960.
Friant power unit	do	15,000		15,000		A study of feasibility of installing a small powerplant at the existing Friant Dam is scheduled during fiscal year 1958.
Friant-Kern unit extension.	do	200,000		80,000	120,000	Investigation to study the engineering and economic feasibility of extending Friant-Kern unit by water exchange or importation to provide increased water service to the Friant-Kern area is scheduled during fiscal years 1958–60.
Madera unit extension	do	150,000		35,000	115,000	A program to study the engineering and economic feasibility of extending Madera unit by water exchange or importation to provide increased water service to this area is scheduled during fiscal year 1958 to fiscal year 1960.
Arvin-Edison unit	do	150,000		35,000	108,466	Investigation of the engineering and economic feasibility of providing an additional supply of water for this unit of 100,000 acres in the Kern River division by exchange or importation, is scheduled during the period fiscal year 1958 through fiscal year 1961.
Mendota-Kings unit	do	285,000		64,000	221,000	Studies of engineering and economic feasibility of this unit as a part of the Central Valley comprehensive plan to provide water service to about 300,000 acres in the Kings River area to supplement inadequate supplies. Applications for supplemental water are presently on file from Tulare Lake water storage district and other irrigators in the area. Preliminary studies are scheduled to be initiated during fiscal year 1957 as a part of the east side division reconnaissance study leading to the initiation of detailed feasibility studies in fiscal year 1958.
Nashville unit	do	200,000		75,000	125,000	Investigation to be initiated in fiscal year 1958 of the feasibility of providing a storage reservoir on the Consumnes River for irrigation and to prevent a recurrence of the damaging floods of about 1 year ago. Study to be completed in fiscal year 1959.
Yolo-Zamora unit	do	135,000	85,000	50,000		Engineering and economic studies are required to determine the feasibility of including 20,000 acres of land Yolo-Zamora Water District and vicinity as a unit of the Central Valley project through extension of the Sacramento Valley canals service area as a result of strong local interest. A report is scheduled for fiscal year 1958.

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued						
(c) *Project investigations*—Con.						
Region—Continued						
Klamath project:						
Butte division	Oregon and California	$245,198	$60,000	$5,000		Continuing investigation of the feasibility of an irrigation project in Butte Valley of the upper Klamath Basin which contains some 41,000 acres. Organized project landowners are participating financially in the studies. A report is scheduled at the end of fiscal year 1957.
Klamath project, extension	do	173,000	36,600	5,000		A feasibility report was substantially completed in fiscal year 1956. Additional studies are required to determine a plan for correcting a drainage problem in the area. The final report will be completed by the end of fiscal year 1957.
Lost River storage unit	do	200,000	95,000	65,000	$19,557	Investigation to develop a plan and determine its feasibility, to provide for maximum settlement and agricultural development of the public lands in the Tule Lake area without decrease in the effectiveness of the upper Klamath River Basin as a waterfowl habitat. A report is scheduled for completion in fiscal year 1959.
Region 3:						
Bridge Canyon project	Arizona	1,169,000	5,000	5,000	8,744	Bridge Canyon project consists of a dam and powerplant at Bridge Canyon Dam site on the Colorado River, transmission lines to load centers, and a silt-retention dam at Coconino site on the Little Colorado River. The funds requested are for miscellaneous activities, including cooperation with the State of Arizona should it undertake the development.
Dixie project	Utah	345,000	15,600	25,000	6,201	A report was completed in 1953 and the work underway consists of revising that report to bring it up to date and in line with current procedures and standards.
Holbrook project	Arizona	248,000	6,000	6,000	131,742	Funds for fiscal year 1957 and fiscal year 1958 are for stream gaging and sediment sampling by Geological Survey which must be completed prior to start of a feasibility study in fiscal year 1959.
Las Vegas pumping project	Nevada	107,000	2,000	2,000	3,984	Investigation to determine methods of delivering water from Lake Mead to the Las Vegas area to supplement the present water supply from an artesian basin underlying Las Vegas Valley. A preliminary report has been completed but the funds for fiscal years 1957 and 1958 are to provide for any necessary studies that may be required to resolve the water-supply problem of the area.
[illegible]	Arizona	900,000	33,400	52,000	19,651	Continuation of preconstruction studies of a dam and powerplant

Marble Canyon project	Arizona	900,000	33,400	52,000	19,651	Continuation of preconstruction studies of a dam and powerplant needed to meet power demands in the Southwest. Report to be completed in fiscal year 1958.
Middle Gila River project	do	190,000	55,000	60,000	47,065	A reconnaissance report was completed in July 1956. Feasibility studies now underway in cooperation with the Corps of Engineers of the possibility of providing flood control and supplemental irrigation water for land along the middle Gila River in Arizona. Report to be completed in fiscal year 1959.
Winslow project	do	225,000	3,000	3,000	169,748	Funds for fiscal year 1957 and fiscal year 1958 are for stream gaging by Geological Survey which must be completed prior to start of feasibility study in fiscal year 1959.
Region 4:						
Animas-LaPlata project	Colorado and New Mexico.	1,070,000	87,471	33,200	616,800	Investigation in progress to evolve multiple-purpose plans for more efficient utilization of waters of Animas and La Plata Rivers to serve some 87,000 acres of land and to provide data for use by Colorado and New Mexico in selecting projects for use of allotted Colorado River water. This is a priority project under sec. 2, Public Law 485.
Bear River project	Utah and Idaho	692,000	66,586	1,000	1,000	Multiple-purpose investigation in progress to develop plan for fullest practicable control and use of Bear River waters now wasting to Great Salt Lake. Some 115,000 acres of land and a 9,000-kilowatt powerplant are involved. Status report will be prepared conserving data for subsequent investigation if and when outside repayment assistance is secured at which time the study will be resumed and completed.
Bostwick Park project	Colorado	113,000	47,820	56,000	----------	Economically justified development to provide new and supplemental irrigation water for some 6,800 acres was outlined in 1950 Gunnison River reconnaissance report. Detailed investigations would be undertaken in fiscal year 1957 as priority project under sec. 2, Public Law 485.
Dolores project	Colorado and Utah	595,000	95,718	110,000	120,000	Status report completed in fiscal year 1954 shows potential projects to serve about 66,000 acres of land to be economically justified. Program for fiscal year 1958 would continue detailed investigations for authorizing report to be completed in fiscal year 1959.
East Cache project	Utah and Idaho	255,000	1,000	1,000	520	A feasibility report was completed in fiscal year 1956 on potential project to provide new and supplemental irrigation water to about 14,000 acres in an important agricultural area in Utah and to furnish local communities with firm supply of municipal water. Although economically and engineeringly feasible outside repayment assistance will be required and no further action is contemplated except for collection of ground-water records in fiscal year 1957–59.
Fruitland Mesa project	Colorado	286,000	120,674	33,000	----------	Investigations initiated in fiscal year 1956 on potential project to provide new and supplemental irrigation water to about 19,000 acres of land in an important agricultural area in western Colorado which has been hard hit by droughts in recent years. Report to be completed in fiscal year 1958.
Fruitgrowers Dam project extension.	do	63,000	----------	4,778	----------	Authorizing report was completed March 1954. Fiscal year 1958 program would revise report as necessary for submission to Congress with next group of participating projects.

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued						
(c) *Project investigations*—Con.						
Region 4—Continued						
Gooseberry project	Utah	$150,000	$170,000	$8,000	$44,122	Project involves transbasin diversion from the Price River in the Colorado River Basin to provide supplemental water for about 16,000 acres in the Bonneville Basin. A feasibility report was completed in fiscal year 1952, but a more complete evaluation of the Price River area requirements must be made to determine if surplus water is available for transbasin diversion. These studies will be made in fiscal year 1957–59, and the Gooseberry project report revised as necessary.
Pack Creek project	do	50,000	18,000	25,679		Reconnaissance report completed in fiscal year 1953 shows potential development to supply new and supplemental irrigation water to have high benefit-cost ratio. Detailed project investigation to be initiated in fiscal year 1957 to meet municipal water need brought about by present uranium mining and processing activity.
Savery-Pot Hook project	Colorado and Wyoming.	290,000	1,000	4,689		Authorizing report on potential project to supply new and supplemental irrigation water to large area in Little Snake River Basin is essentially complete but is awaiting decision by State of Wyoming as to whether State will construct portion of project.
Sublette project—Buckskin division.	Wyoming	502,000	6,000	28,000	168,991	Investigation in progress to appraise possibilities for utilizing regulated flows of Green River tributaries for irrigation on about 50,000 acres and for power. Status report completed in fiscal year 1956 for the Sublette project outlines an economically justified development worthy of more detailed study such as is now underway. Report to be completed in fiscal year 1960.
Walker River project	California and Nevada	240,000	25,000	60,000	115,207	A reconnaissance report on the possibility of regulating the Walker River flows for flood control, power, and supplemental water for about 71,000 acres was completed in October 1955 and released to local interests to assist them in reaching agreement on a plan of development. More detailed studies are to be initiated in fiscal year 1957 leading to a feasibility report in fiscal year 1960.
Washoe project (ultimate phase).	do	454,420	39,114	58,400	261,600	The Washoe project involves plans to increase power generation, lessen flood damage, and provide additional new and supplemental irrigation water in western Nevada. Potential development would replace insecure importation of power from plants in California west of Sierra Nevada Range, eliminate heavy flood damage such as occurred in November 1950, and expand agricultural resources of the

						curred in November 1950, and expand agricultural resources of the area. Initial phase authorized in August 1956, and detailed advance planning studies are underway prepatory to start of construction. Studies on Hope Valley unit of ultimate phase to continue through fiscal year 1958 to provide coordination with definite plan studies on initial phase.
West Divide project	Colorado	760,000	90,270	142,000	403,000	Investigation of potential project to supply new and supplemental irrigation water for about 66,000 acres, municipal water and power to be initiated in fiscal year 1957. Reconnaissance investigations completed in fiscal year 1956 show further detailed investigations to be warranted.
Woodruff-Cokeville project	Utah and Wyoming	150,000	20,000	70,000	60,000	Investigation to be initiated in fiscal year 1957 to provide supplemental water to 40,000 acres on upper Bear River. Preliminary studies indicate proposed development to be feasible; necessary water was allocated in recently completed Bear River compact.
Region 5:						
Arbuckle project	Oklahoma	55,000		25,000	30,000	Investigation of a potential project to provide municipal and industrial water to communities in south-central Oklahoma. A reconnaissance report is scheduled for completion in fiscal year 1958, and a feasibility report is scheduled for completion in fiscal year 1959.
Chikaskia project	Kansas and Oklahoma	69,500	17,000	32,500	20,000	Feasibility study initiated in fiscal year 1957 of multipurpose plan to provide badly needed and better quality water for Wellington and Caldwell, Kans., and Enid, Blackwell, and Braman, Okla., together with flood control, recreation, and fish and wildlife benefits, as well as irrigation for approximately 4,000 acres. Report to be completed in fiscal year 1958.
Gulf Basins project	Texas	4,000,000	990,198	1,082,000	1,314,585	Investigation now in progress to develop an overall plan for the utilization of the waters of the gulf coastal streams for irrigation, municipal and industrial developments and other beneficial uses. Feasibility report now scheduled for fiscal year 1960; should be completed as soon as possible to prevent any ill-advised development not compatible with the overall plan and full use of the water.
Lawton-Duncan project	Oklahoma	161,886	80,000	34,000		Investigation of a potential multipurpose project to include flood control, municipal, and industrial water, irrigation of limited areas, and other purposes. Completion of a reconnaissance investigation is programed during fiscal year 1957. A feasibility investigation of the project is to be initiated immediately upon completion of the reconnaissance report. The feasibility report is to be completed in fiscal year 1958.
Norman project	do	130,832	8,000	6,000		Investigation of a potential multipurpose project to provide municipal and industrial water to the cities of Norman (including adjacent university and naval air technical training center), Midwest City, and Del City and the Tinker Air Force Base, and provide flood control, fish and wildlife conservation, and recreational benefits. A feasibility report has been completed and is being processed for submission to Congress. Action on authorizing legislation is anticipated during the fiscal year 1957 session of Congress. The current program is for the collection of basic hydrologic data necessary for further studies.

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued						
(c) *Project investigations*—Con.						
Region 5—Continued						
San Juan-Chama project	Colorado and New Mexico.	$1,092,689	$46,800	$20,000	----------	Feasibility investigations in progress of a project designed to utilize western slope water of the San Juan Basin in the Rio Grande Basin where water shortage is very acute. The feasibility report was completed in fiscal year 1956, and the funds for fiscal year 1957 and fiscal year 1958 are required to complete studies of alternate plans, and to maintain appropriate liaison activities with the State and local interests.
San Luis Valley project	Colorado	230,784	17,000	56,000	$10,000	Feasibility investigation in progress for the San Luis Valley project with the exception of the Conejos division of which the Platoro unit has already been constructed. The feasibility report for the Rio Grande and Weminuche Pass divisions was completed in fiscal year 1956. A reconnaissance report for the closed basin division was completed early in fiscal year 1957, and a feasibility report for that division is scheduled for completion in fiscal year 1959.
Region 7:						
Fryingpan-Arkansas project	do	833,972	50,000	7,000	----------	The high altitude stream measurement stations will be continued in fiscal years 1957 and 1958 to collect the essential runoff data. In addition a small amount of work will be done on refinement of plan and any special studies required in connection with congressional consideration of authorization will be made.
Granada project	Colorado and Kansas	69,736	15,000	20,000	30,000	Work will be continued on the study of possibilities for storage of surplus winter flows and flood flows of Arkansas River below John Martin Reservoir, and a plan of development established. Engineering and agricultural surveys, hydrologic explorations will be advanced. The feasibility report is scheduled for completion in fiscal year 1959.
Ingalls pumping project	Kansas	390,753	97,239	76,000	62,000	Extensive hydrologic studies including exploration and testing of the ground water aquifer will be completed during fiscal year 1957 to establish the water supply for the project. Semidetailed land classification on the project area will be completed, and the plan of development will be firmed. Preparation of feasibility estimates will be completed in fiscal year 1958. Geologic exploration will be made at construction sites as necessary. The report is scheduled for submission in fiscal year 1959 following necessary economic analyses.
Trinidad project	Colorado	121,579	10,000	60,000	----------	The Trinidad project is a Corps of Engineers' potential project with the Bureau to have the responsibility for negotiation of a repayment contract to recover costs allocated to irrigation. In fiscal year

Trinidad project	Colorado	121,579	10,000	60,000		The Trinidad project is a Corps of Engineers' potential project with the Bureau to have the responsibility for negotiation of a repayment contract to recover costs allocated to irrigation. In fiscal year 1957 studies will be made to evaluate the adequacy of water supply for each ditch in the project area. Water rights will be assessed and the need for subordination analyzed. In cooperation with sponsors of a conservancy district, local interest, and the possibilities of pooling of water rights will be determined to arrive at a reasonably firm estimate of project acreage. The adequacy of the present distribution system will be appraised and some economic studies may be undertaken. Depending upon the results of these studies, more detailed investigations will be initiated in fiscal year 1958 to form a basis for contract negotiations.
Miscellaneous services: Print project reports		136,000	18,000	18,000	100,000	Funds are required for printing of project reports. Printing costs are chargeable to the specific projects but are not scheduled with those projects because it is impossible to predict just when and what reports will be cleared in the review by States, Federal agencies, and the Congress, and ordered to be printed.
Contribution to civil service retirement fund		1,179,100		176,800	1,002,300	Additional fund requirement for PF-854.
Subtotal, project investigation costs		45,281,860	4,152,905	3,958,836	23,716,133	
Cost adjustments		−692,239	−16,590	−12,726	−342,890	Applicable portion of transfers, credits and other expenditures to reconcile costs to appropriations.
Subtotal, project investigation costs to appropriations		44,589,621	4,136,315	3,946,110	23,373,243	
(d) General engineering and research						
Region 2: Subsidence studies		85,000	30,519	10,000		Land subsidence is known to exist in three extensive areas of the lower San Joaquin area in Central Valley, Calif. These deep alluvial or sedimentary soils irrigated to a great extent from groundwater pumping, present a problem in construction and maintenance of engineering features required for the development of these arid areas, as well as a major maintenance problem with existing structures some of which have already been affected. The studies are directed toward the determination of causes qnd controlling factors in such problem areas, looking to possible means of alleviating or minimizing the adverse effects of such subsidence. The program provides for Bureau participation on items of immediate interest and general assistance in a much broader overall program by an interagency committee.
Region 3: Colorado River water-right litigation studies		84,000	34,000	15,000	10,959	The case of *Arizona* v. *California* is before the Supreme Court for determination of the respective rights of California and Arizona to water in the Colorado River. The funds programed are for research and collection of data which will have a bearing on the litigation. Now that the case has actually started, additional costs are being incurred through reproduction of material for the Government's intervention and through increased correspondence relative to data bearing on the case. The Department of Justice also requested that the Bureau assign an engineer to their department to assist in the litigation.

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued						
(d) *General engineering and research*—Continued						
Miscellaneous services:						
General planning studies		$1,412,700	$101,343	$99,000	$553,809	These funds are allotted to the Commissioner's office, Denver, for general planning studies not for specific projects. This program is vital to the overall program of the Bureau of Reclamation. In planning potential irrigation and power projects, it is imperative that all available data are at hand and that necessary and practical procedures and methods be developed to determine the water resources, water requirements of the potential projects, and other basin uses; inflow spillway design floods for dams and other structures; amount and disposition of sediment in reservoirs, conveyance channels, and canals; expected aggradation and degradation of streams as a result of construction of water-control works, etc., and the most beneficial operation of the system of reservoirs in the development and operation of river basin systems. Beginning in fiscal year 1957, this program also includes funds for a study to determine, in cooperation with other agencies, the effect of various programs on water yield of a basin. Of immediate concern, the proposed watershed-treatment programs of the Department of Agriculture, in addition to conserving soil and reducing some flood peaks and sediment load, will affect the water yield. The amount of this influence will vary with different localities and types of treatment. There is little data and no general area of agreement on the magnitude of the effect, or even on methods of estimating the effect. Since an estimate of available water supply is basic to planning of reclamation projects, it is essential that methods are available for estimating the effect on water supply by other programs and that the methods be agreed upon among the interested agencies.
Hydrological studies		528,641	20,816	20,000	100,000	These funds are to permit the Bureau to cooperate with other agencies, through technical subcommittees of the Interagency Committee on Water Resources as well as through direct interagency agreement, on various investigative projects. Through these projects, various types of basic data and various items of research, involving hydrologic procedures or equipment, which are of interagency value, are jointly financed and carried on. These projects vary in nature, with the Bureau sharing in those which are aimed at

						development of better data, procedures or equipment for use in hydrologic and sedimentation studies in western areas which in turn have as their objective the better use of the limited water supplies of the West. During fiscal year 1957 and fiscal year 1958 funds are to be used for evaporation and transpiration studies, development of radioisotope sediment density sampler, development of equipment for measuring sediment loads in streams, and for bringing up-to-date sediment load inventory and hydrologic basin maps.
Contribution to civil service retirement fund.		38,200		6,100	32,100	Additional fund requirement for Public Law 854.
Subtotal, general engineering and research costs.		2,148,541	186,678	150,100	696,868	
Cost adjustments		43,124			−136	Applicable portion of transfers, credits and other expenditures to reconcile costs to appropriations.
Subtotal, general engineering and research cost to appropriation.		2,191,665	186,678	150,100	696,732	
Total, engineering and economic investigation costs.		61,325,783	5,538,433	5,424,350	28,138,414	
Cost adjustments		−410,688	−31,950	−13,230	−347,369	Applicable portion of transfers, credits and other expenditures to reconcile costs to appropriations.
Total, engineering and economic investigation costs to appropriations.		60,915,095	5,506,483	5,411,120	27,791,045	
2. ADVANCE PLANNING						
Region 3: Santa Margarita project	California	260,000	2,000	2,000	33,655	Preparation of definite plan report and start of construction is dependent upon outcome of current water-right litigation. Funds for fiscal year 1957 and fiscal year 1958 are for any necessary activities arising from that litigation.
Region 4: Washoe project (initial phase).	California and Nevada.	1,300,580	215,000	170,000		This project, authorized on Aug. 1, 1956, would provide for development and use of surplus waters in Truckee and Carson Rivers for full and supplemental irrigation, power generation, flood control, fish and wildlife mitigation and improvement, recreation, and other uses. Construction funds anticipated beginning in fiscal year 1959.
Contribution to civil service retirement fund.		272,200		7,500	264,700	Additional fund requirement under Public Law 854.
Total, advance planning costs.		8,046,593	484,867	179,500	5,705,355	
Cost adjustments		−6,630	−4,910	−1,720		Applicable portion of the transfers, credits, and other expenditures to reconcile costs to appropriations.
Total, advance planning costs to appropriations.		8,039,963	479,957	177,780	5,705,355	

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

Program item	State	Total estimated cost	Fiscal year 1957 program	Fiscal year 1958 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3. INVESTIGATIONS OF EXISTING PROJECTS						
Region 1:						
Yakima	Washington	$24,000	$7,000	$17,000		During fiscal year 1957, investigations as required will be made in irrigation districts in the Sunnyside Division that may elect to participate in overall rehabilitation and drainage program. In fiscal year 1958, studies of the Kittitas Division will be underway to determine extent and probable cost of rehabilitation of project works.
Umatill project	Oregon	10,000		10,000		Effectuation of approved amendatory repayment contracts in fiscal year 1956. Rehabilitation survey of irrigation facilities serving 2 districts in fiscal year 1958.
Region 5: Rio Grande project	New Mexico and Texas.	192,400	45,600	88,000	$30,038	This investigation is to develop a plan that will minimize water losses during transit by constructing a lined conveyance channel between Leasburg Dam and the American Dam; by lining all or part of the distribution system between Caballo Dam and the lower end of the Rio Grande project; and by enlarging and modifying the Franklin Canal through the cities of El Paso and Isleta. A reconnaissance report on the 1st 2 purposes was completed early in fiscal year 1957 and a feasibility report on the complete investigation is scheduled to be completed in fiscal year 1959.
Region 6:						
Milk River project	Montana	65,000	13,500	1,500	3,271	Work will be completed in fiscal year 1957 on reclassification of all class 5 lands in accordance with amendatory repayment contract approved by Public Law 402. Miscellaneous work in connection with completion of other repayment matters will be continued.
Riverton project	Wyoming	74,000	5,000	2,000	6,219	This investigation is required to enable compliance with art. 5B on repayment contract No. 14-06-600-67, requiring disposition of 9,474 acres of class 5 lands in the Midvale Irrigation District prior to 1962.
Shoshone project	do	43,608	494	500	2,629	Investigation required to enable compliance with art. 12 of the repayment contract No. 114-1556 which provides that 8,043 acres of class 5 land shall be disposed of by the 10th anniversary of the contract, or October 1959.
Contribution to civil-service retirement fund.		11,200		6,800	4,400	Additional fund requirement for Public Law 854.
Total cost, investigations of existing projects.		557,600	96,393	125,800	148,131	

Cost adjustments		777,340	−299		−1,804	Applicable portion of transfers, credits, and other expenditures to reconcile costs to appropriations.
Total, investigations of existing projects cost to appropriations.		1,334,940	96,094	$125,800	146,327	
4. ALASKAN INVESTIGATIONS						
Alaska district:						
Caribou project		110,000	1,000	12,720		Studies will be complete and project report will be prepared in fiscal year 1958. Additional water supply data, to be obtained in fiscal year 1957, are essential prior to completing report. Caribou project would be tied with the Eklutna project transmission system.
Devil Canyon project		692,800	189,738	218,680	252,964	Devil Canyon project is programed to provide a large block of relatively low-cost power (390,000 kilowatts ultimate) to serve the rail belt area from Anchorage to Fairbanks. Ample available energy would afford an opportunity for industrial growth and development of prime importance to the Territory.
Matanuska Valley project		105,000	3,000	3,000	96,233	Studies are needed to determine crop-yield benefits that may be derived through irrigation as a prerequisite to establishing feasibility of and developing a future irrigation system for this region. Studies being made in cooperation with Alaska Experiment Station.
Stream gaging and sediment sampling.		100,000	12,000	12,000	76,000	Funds programed to provide gaging and sediment sampling stations needed to secure data on the following rivers: Susitna River at Gold Creek and Denali, Bradley River, Chulitna River, Chakachatna River, and Yukon River.
Contribution to civil service retirement fund.		34,600		3,600	31,000	Additional fund requirements for Public Law 854.
Total, Alaskan investigations costs.		2,788,000	205,738	250,000	2,166,200	
Cost adjustments		41,993				Applicable portion of transfers, credits and other expenditures to reconcile costs to appropriations.
Total, Alaskan investigations cost to appropriations.		2,829,993	205,738	250,000	2,166,200	

Schedule of general investigations program, fiscal years 1957 and 1958—Continued

RECAPITULATION

Program item (1)	State (2)	Total estimated cost (3)	Fiscal year 1957 program (4)	Fiscal year 1958 estimate (5)	Balance to complete investigations (6)	Remarks (7)
1. Engineering and economic investigations:						
(a) Reconnaissance		$1,927,011	$280,058	$322,310	$714,661	
(b) Basin surveys		12,206,798	903,432	992,600	3,006,409	
(c) Project investigations		44,589,621	4,136,315	3,946,110	23,373,243	
(d) General engineering and research		2,191,665	186,678	150,100	696,732	
Total engineering and economic investigations		60,915,095	5,506,483	5,411,120	27,791,045	
2. Advance planning		8,039,963	479,957	177,780	5,705,355	
3. Investigations of existing projects		1,334,940	96,094	125,800	146,327	
4. Alaskan investigation		2,829,993	205,738	250,000	2,166,200	
Total cost to appropriations		73,119,991	6,288,272	5,964,700	35,808,927	
Service facilities and stores			−65,846		−419,174	
Total expenditures		73,119,991	6,222,426	5,964,700	35,389,753	
Unliquidated obligations			−279,574	−6,700	−14,976	
Total obligations		73,119,991	5,942,852	5,958,000	35,374,777	

Appropriations

1948	$2,500,000	1953	$4,000,000
1949	4,550,000	1954	3,000,000
1950	4,950,000	1955	3,750,000
1951	5,635,000	1956	5,104,000
1952	4,500,000	1957	5,680,000

General investigations—Itemization of estimate

	Estimate 1957	Estimate 1958
Program and financing:		
Total obligations	$5,985,892	$5,958,000
Unobligated balance brought forward	−150,433	
Reimbursements from non-Federal sources (69 Stat. 356–360)	−155,459	−26,000
Appropriation	5,680,000	5,932,000
OBLIGATIONS BY OBJECTS		
Direct obligations:		
01 Personal services	3,960,717	4,254,609
02 Travel	232,195	235,458
03 Transportation of things	35,590	32,674
04 Communication services	32,532	34,505
05 Rents and utility services	42,490	29,565
06 Printing and reproduction	76,439	73,341
07 Other contractual services	870,201	436,041
Services performed by other agencies	341,349	337,105
08 Supplies and materials	127,671	135,990
09 Equipment	108,144	105,941
10 Lands and structures	2,000	
11 Grants, subsidies and contributions: Contribution to retirement fund		255,600
13 Refunds, awards and indemnities	740	750
15 Taxes and assessments	3,365	3,421
Subtotal	5,833,433	5,935,000
Deduct charges for quarters and subsistence	3,000	3,000
Total direct obligations	5,830,433	5,932,000
Reimbursable obligations:		
Services included in other accounts: Reclamation trust funds	155,459	26,000
Total obligations	5,985,892	5,958,000

HOUSE LANGUAGE ON INVESTIGATIONS PROGRAM

Chairman HAYDEN. I am concerned with the language in the House report with respect to the general investigations program.

In view of this language, would you be able to do any work on an investigation that was not mentioned in the justifications?

Mr. DEXHEIMER. No, sir; except that we could add 15 percent onto any project that was included in the budget justification, that we would not be able to start any project that had not actually been listed and approved in the appropriation.

Chairman HAYDEN. In the past, have you been so limited?

Mr. DEXHEIMER. No, sir; we have not been limited on starting investigations or dropping investigations, or the transfer of funds for those investigations; and I would like to point out, Mr. Chairman, that our budget requests are made up in the fall before they are presented to the budget in January, which means almost a year prior to the time that we get the funds, and there are so many varying conditions that are beyond our control that happened in that time that it is almost impossible for us to anticipate that far ahead exactly what investigations or how much money we will need for them to carry on starting the following July.

ACTION UNDER HOUSE LANGUAGE

Chairman HAYDEN. If the justifications included funds for "Project investigations," and during the current session of Congress, this particular project was authorized, could you under the language in the House report use any funds for "Advanced planning"?

Mr. DEXHEIMER. No, sir.

Under this language we would not be able to change and put any money on advanced planning unless it was specifically approved.

Chairman HAYDEN. Assume that you intended to complete an investigation in the current fiscal year, but due to unforeseen conditions you did not complete it. As I read this report you would not be allowed to use funds to complete this investigation. Am I correct?

Mr. DEXHEIMER. That is correct, Mr. Chairman.

Chairman HAYDEN. The report imposes a limitation of 15 percent on increasing any investigations. I would like to have you comment on the effect of such limitation.

WORK STOPPAGE IMPOSED

Mr. DEXHEIMER. Well, as to the limitation of not being able to complete the investigation, particularly if we had a small amount of work to do and because of the effect of court decisions or other matters we had some of that work that we were unable to do by June 30, we would have to stop that work, lay off our crews as of June 30, and then submit a budget request the following fiscal year and then go back and finish perhaps what might be only a very small amount of work. Under the 15-percent limitation, the same thing would apply. If we found that we had a dam site that we thought would be the proper one and we got into drilling and found that the foundation conditions were not suitable, we would have to move to another site perhaps in the general area and expend quite a bit more money in investigating to find an adequate dam site. Under that 15-percent limitation, we would be stopped from doing that until such time as we were able to present a new budget request and get the money approved, which would be very uneconomical, would be impractical, from the working standpoint, and would certainly be a material delay in getting projects planned and presented to the Congress, particularly where the conditions of the area require rather speedy action.

We have just been through a terrific drought in the southwest part of the country and that has had the tendency to accelerate interest in irrigation projects and water-saving projects, but under this kind of a limitation, we would be unable to do anything unless it had actually been approved.

BUREAU AUTHORITY FOR FLEXIBILITY IN FUNDS

Chairman HAYDEN. It seems to me that the very nature of investigations, due to uncertainties that may be involved, make it very difficult to estimate the cost of any certain investigation. For that reason it is absolutely essential that the Bureau have authority to use the funds with some degree of flexibility.

In the past you have had absolute flexibility, have you not?

Mr. DEXHEIMER. Yes, sir; we have. We would like that flexibility. If Appropriations Committees feel that they would prefer that they

be notified in advance, we would be very happy to do so and that would give them the information that they need.

If for some reason they had objection to our starting a new investigation or transferring funds, they could let us know in ample time so that the appropriations could be spent in accordance with the Appropriations Committee's wishes, but I feel very strongly that we do need latitude for investigation, and these funds are so small compared to our overall program that it seems to me that controls of this type would be unreasonable administratively, and from the standpoint of carrying on the desirable work in our western water-supply problems.

GULF BASINS PROJECT INVESTIGATION

Chairman HAYDEN. The House report states funds for the gulf basins project investigation is to be limited to $900,000.

How much is tentatively allocated in the justifications to this investigation?

Mr. DEXHEIMER. $1,080,000.

Chairman HAYDEN. How much was available for this investigation during the current fiscal year?

Mr. DEXHEIMER. It was $990,000, Mr. Chairman. We feel that we need a little bit more. We need the full amount of that in order to carry on the investigation, bringing it up to meet the needs of that very hard-stricken drought area of Texas, and we find that the people of Texas are very much behind this investigation which would make an overall plan for the State to solve their major water problems.

Chairman HAYDEN. How long will it take to complete these investigations?

Mr. DEXHEIMER. We expect to have the project report completed at the end of fiscal year 1960. However, we have already presented to the Congress segments of that plan for authorization, and we would continue to do that so long as we know that they fit into the overall plan.

OVERALL PLAN NECESSARY

Chairman HAYDEN. It is essential, however, that where there are so many streams involved that you do have an overall plan?

Mr. DEXHEIMER. Yes, sir. We think it is very essential because it is such a widespread plan and the major rivers, of course, being in the eastern part of Texas without fitting in that water supply to the overall plan, you could very well be wasteful in the overall project, and we think that an adequate investigation is the only means for a long-range plan, fitting in units and segments as they seem desirable and as the Congress approves them.

Chairman HAYDEN. The plan to start with appears to be visionary, and for that reason it requires careful investigation as to what is practical and what is impractical. That is the way I understand it. It would be a waste of money to tackle it piecemeal. We had better look at it as a whole.

Mr. DEXHEIMER. Yes, sir. We think that the proper way to develop any of these water resources is to look at the whole picture and be sure that each segment fits in, and you do not underdevelop or overdevelop any unit.

I might say, Mr. Chairman, that $50,000 of this request is civil-service retirement fund.

PLEASANT VALLEY PROJECT

Chairman HAYDEN. The report of the House committee states that no funds are to be used to resurvey the Pleasant Valley project. How much would be required in fiscal 1958 to continue these studies?

Mr. DEXHEIMER. We think about $200,000 to do the drilling and the necessary additional engineering to determine that that is an entirely feasible site. We think that that work should go ahead, Mr. Chairman, on the planning.

It does not necessarily mean that the project would be authorized for the Bureau of Reclamation to build, but without adequate plans for the river basin, in this case the Snake River area above its confluence with the Salmon, we feel that it is very important that an overall plan to utilize to best advantage the sites available is essential.

We made a preliminary report on that last October which appears to have great promise, and we would like very much, and I think it is very important that that plan be carried through to completion to see that this project is feasible and that it is entirely adequate and we can get a good cost estimate for doing the work so that the Congress and any others who are concerned with flood control, fish and wildlife, the power output in the Northwest, and irrigation assistance from power revenues, will have another possibility to consider for either authorization or for licensing to someone else to build under full development rather than what might be a partial development in an area.

HOUSE ACTION ON TRANSFERRED FUNDS

Senator DWORSHAK. Mr. Dexheimer, the House report banned the use of transferred funds in both fiscal years 1957 and 1958. What was done in 1957 on that? I never got the facts.

Mr. DEXHEIMER. We did some preliminary work, Senator Dworshak, on an engineering examination of the site, and we advertised for bids for doing the exploratory drilling on a site which is somewhat downstream from the site proposed by the power companies under their application for license with the Federal Power Commission.

Senator DWORSHAK. How much money was transferred and from what other points?

Mr. BENNETT. What we planned to do, Senator, in fiscal year 1957 was to have transferred from our item the "Snake Narrows investigation" $7,500 and from our "Upper and Middle Snake River Basin study" $27,000, from the "Central Valley" items about $50,000, making up the total of $84,500 which we had contemplated spending in fiscal year 1957.

Senator DWORSHAK. How much did you spend?

Mr. BENNETT. We spent about $11,000 preparing the special report which was put out in October, and since that time we have spent about another $10,000.

Senator DWORSHAK. For what was that $10,000 spent?

Mr. BENNETT. Getting ready for advertising these bids and some preliminary water-supply studies we have already undertaken.

Senator DWORSHAK. Were you planning to use the balance of that $84,500 minus the $21,000 you used in 1957 during fiscal year 1958, or were you planning to ask for funds?

Mr. BENNETT. That was for fiscal year 1957.

Senator DWORSHAK. The entire amount?

Mr. BENNETT. The entire amount of $84,500 was to have been used in fiscal 1957.

Mr. DEXHEIMER. Senator Dworshak, perhaps I can clear that up a little bit. We did advertise for bids for drilling the site early in April. While we were before the House Appropriations Committee, this item was brought up, and they instructed us to stop, not to award that contract; to stop all work on the investigation of the Pleasant Valley site, which we did. Therefore, we have not spent any money on that since April.

Senator DWORSHAK. You did spend $21,000?

Mr. DEXHEIMER. Approximately; yes, sir.

DRILLING CONTRACT

Senator DWORSHAK. What were you planning to do in fiscal 1958?

Mr. DEXHEIMER. We were going to continue payments under those drilling contracts and prepare the necessary engineering report after the results of those drilling and tunneling contracts were known to our engineers and geologists.

Senator DWORSHAK. But the House report refers to fiscal year 1958. Were you expecting to continue use of this $84,500 during fiscal year 1958 or to transfer additional funds or request an appropriation of other funds for use in 1958?

REQUEST TO HOUSE

Mr. DEXHEIMER. We made a request by letter to the House Appropriations Committee asking their permission to utilize fiscal 1957 funds, as Mr. Bennett just outlined to you. We also asked that we be given the authority to use general investigation funds of our 1958 request to continue that work in fiscal 1958.

Senator DWORSHAK. How much would have been required besides the $84,500 already allocated?

Mr. BENNETT. Had we been able to spend that $84,500 we estimated, we would need about $132,000 in fiscal year 1958.

Senator DWORSHAK. With that total sum, you planned to complete your investigation of the possibilities of a high dam at the Pleasant Valley site?

Mr. DEXHEIMER. Yes, sir. We would have been able to submit what we call a feasibility report.

Senator DWORSHAK. That would have completed that work?

Mr. DEXHEIMER. Yes, sir.

Senator DWORSHAK. That would have provided for submission of a report on what you had done concerning feasibility so that Congress could determine whether there should be authorized any particular project at that site.

Mr. DEXHEIMER. That is correct, and it also would be available to the Federal Power Commission, as Secretary Seaton suggested, for their determination as to possible licensing at that site.

Senator DWORSHAK. Thank you.

Chairman HAYDEN. Have you any questions, Senator Young, about investigations?

Senator YOUNG. I have no questions.

CONTINUATION OF PLEASANT VALLEY WORK

Mr. DEXHEIMER. I might add, Mr. Chairman, that on Pleasant Valley we feel again that that work should be continued in order for us to come up with this feasibility report and adequately demonstrate the advantages in that stretch of the Snake River.

Senator DWORSHAK. Prior to this time you had not done any investigation work there at all?

Mr. DEXHEIMER. We have done very little in that area, Senator Dworshak. We made some earlier studies and the preliminary report of October of 1956. It looked very favorable. We thought we should continue to be sure that the foundation and our estimates and so on, our water-supply studies, were brought into a little more refinement to show feasibility.

Senator DWORSHAK. You were planning that as a multiple-purpose project?

Mr. DEXHEIMER. Yes, sir. We think the flood control there is very necessary, and we do not see any reasonable prospect of getting it downstream from there. This is the last site on that stretch of the Snake River above its confluence with the Salmon and, of course, if you go below that you get into difficulties with the fish problems.

AGREEMENT BETWEEN BUREAU AND ENGINEERS

Senator DWORSHAK. Is it not also true that the Bureau of Reclamation has some agreement with the Army Engineer Corps to undertake river development north of Pittsburg Landing and that the Army Engineer Corps supervises any public-works development on the Salmon and on the Clearwater River?

Mr. DEXHEIMER. There was such an agreement, I believe, in 1948 which has not been recognized fully by the Corps of Engineers inasmuch as they are going way above what was supposed to have been their limitation.

Senator DWORSHAK. Was that not only on flood-control work there?

Mr. DEXHEIMER. Well, any works above that area involve conservation, irrigation, and many other things besides flood control. I think they must because of the great need for water development in those upper regions, particularly in Idaho.

Senator DWORSHAK. I recall that in the upper Snake River, going almost to the Wyoming border, that the Army engineers have had funds for investigations and surveys. Do you interpret that as meaning that if subsequently there should be any flood-control projects that that agreement of 1948 has, therefore, been abrogated?

Mr. DEXHEIMER. No, sir. It is not necessary to abrogate it. They have continued with certain flood-control work upstream from there, particularly as to revetments and works of that type, but I do believe that nearly all of the works on the upper reaches of any river in the West will involve conservation and irrigation, as well as whatever flood control seems appropriate at that place.

SURVEYS DOWNSTREAM FROM SNAKE RIVER CONFLUENCE

Senator DWORSHAK. However, you are not interested, through the Bureau in undertaking any extensive surveys downstream from the confluence of the Snake and the Salmon; are you?

Mr. DEXHEIMER. We have not done anything on it, and we do not propose to; no, sir; except as it might involve irrigation which, as you know, we have done in certain areas.

Senator DWORSHAK. I was speaking primarily about Idaho in the Snake River drainage area where there is no reclamation.

Mr. DEXHEIMER. No, sir. We actually do not believe it is practical or feasible at the present time to build Nez Perce, for example, for those projects below, because of the fish problems which have not been solved, and in my mind will not be solved for a good many years.

Senator DWORSHAK. Also, if there is any irrigation benefit involved in those dams downstream from the Pleasant Valley site, it would be to earmark surplus funds from power generation for helping to reimburse the cost of reclamation developments possibly upstream and not actually involving the diversion of water downstream.

Mr. DEXHEIMER. Well, that might be true. I don't know offhand of any that are directly connected to irrigation projects along that stretch of the river, but I think they should be cooperatively planned so as to fully develop whatever potential there may be.

TWO ASPECTS OF DOWNSTREAM PROBLEM

Senator DWORSHAK. Well, of course, there are the two aspects: One, the financial reimbursability from surplus power revenue, and also the diversion of funds for actual reclamation of land, and that would necessarily be downstream from any reservoir built in that stretch of the Snake River.

Mr. DEXHEIMER. Yes, it would.

Senator DWORSHAK. You have heard about proposals to create a basin account. That proposal has not made much progress, but that would involve the earmarking of any surplus funds for assisting reclamation projects financially rather than by diversion of water.

Mr. DEXHEIMER. Yes, sir.

Senator DWORSHAK. That is all, Mr. Chairman. Thank you.

MIDDLE GILA RIVER INVESTIGATIONS

CHAIRMAN HAYDEN. I understand that the budget estimate includes $60,000 to continue investigations in the Middle Gila River Basin. Am I correct?

Mr. DEXHEIMER. That is correct, Mr. Chairman.

Chairman HAYDEN. Two of the finest and most productive agricultural areas in the United States are located in southern Arizona. One is in Graham County, the other in Pinal County. Each enjoys a year-long growing season and has soils of excellent quality. But both are heavily handicapped for lack of water, an additional supply of which could be obtained from the Gila River if the waters of that stream were properly conserved.

In each area water pumped from wells has come to be the primary source of water, which obviously is limited. A flood-detention dam in eastern Graham County coupled with establishing a channel in the Gila River, similar to the channelization work that has been done along the Rio Grande in New Mexico, will make available water now lost by evaporation or wasted by worthless water consuming plants.

It is safe to assume that the construction of a dam at the Buttes site in Pinal County will increase the average annual water supply at the headgates of the San Carlos Irrigation District by 50,000 acre-feet. There are records to show that during the 10 years, 1946–55, and annual average crop acreage of 31,295 acres of privately-owned land in the district produced crops (exclusive of livestock) to the value of $60,300,000. The average annual water supply deliverey to these lands from all project sources was 79,892 acre-feet. Thus each acre-foot of water produced crops to the value of $75.50. On that basis an additional 50,000 acre-feet of water would produce $3,775,000 worth of crops annually.

If only two-thirds of the 50,000 acre-feet is delivered at the farms then such water at $75.50 an acre will produce crops worth $2,500,000. But it will be silt-free water under improved regulation, both of which will result in increased unit yields. It will aso be a supplemental supply and it is well known that the 3d and 4th acre-foot each produce greater values than the first two.

And finally, there is one other factor that cannot be overlooked in estimateing benefits to cost. Pinal County, where the San Carlos project is located, adjoins Maricopa County with its Salt River project and has the same soil and climate. With water, an acre of land there can equally serve as a basis for the creation of new wealth and it is of record that since 1934 the Federal Government has collected income and excise taxes in Maricopa County amounting to over $609 million. The United States Treasury needs the revenue which will be lost by delay.

In conducting these investigations, it is my hope that consideration will be given to including the existing San Carlos irrigation project in any comprehensive development of this section of the river.

Mr. DEXHEIMER. We will certainly do that, Mr. Chairman.

AMENDMENT REQUESTED

Chairman HAYDEN. The Department's formal request for an amendment will be included in the record at this time.

(The matter referred to follows:)

BUREAU OF RECLAMATION

GENERAL INVESTIGATIONS

Appropriation 1957	$5,680,000
Estimate	5,932,000
House Allowance	4,500,000
Restoration Requested	1,432,000

(P. 8, line 13)

Amendment requested:

(1) Page 8, line 13 strike out "$4,500,000" and insert in lieu thereof "$5,932,000", the estimate, or an increase of $1,432,000 in the appropriation.

(2) Page 8, line 13, strike out "$3,800,000" and insert in lieu thereof "$5,182,000", the estimate, or an increase of "$1,382,000" in the appropriation.

HOUSE REPORT

"Appropriation, 1957	$5,680,000
Estimate, 1958	5,932,000
Recommended, 1958	4,500,000
Comparison:	
Appropriation, 1957	−1,180,000
Estimate, 1958	−1,432,000

"As in the case with the Corps of Engineers the committee has in the past appropriated a lump sum for the general investigations program, with recognition of the fact that the allocations to individual projects as set out in the justifications must necessarily be tentative and subject to some adjustment as the program proceeds. However, the committee was not at all prepared for the complete disregard for the justifications which was demonstrated by the Bureau in the current fiscal year. The number and extent of transfers between projects which have been made is so great as to make the committee review of last year completely meaningless. For example, a total of 22 investigations which were presented in the program last year were not allotted any funds. A total of 43 investigations which were not programed in the 1957 justifications have been allotted a total of $1,318,617. In addition, other projects have been shifted from the general investigations studies into the advance planning phase. These actions were taken without prior clearance with the committee which, on the basis of the hearings of last year, can only be considered as gross negligence. On the basis of this most recent performance the committee now believes that a tightening of controls on the program is necessary.

"Hereafter, the transfers between projects and units of projects are to be limited to 15 percent of the amount allotted in the justifications to the project receiving the transferred funds. No projects or units of projects budgeted in the investigation stage are to be moved into advance planning. No funds are to be used on any project or unit of a project not itemized in the budget justifications for the fiscal year for which the funds are appropriated. In addition the Bureau is directed to submit to the committee a quarterly report showing all transfers made in the general investigations item for the preceding 3 months.

"The amount of funds to be allocated to the gulf basins project is limited to $900,000.

"The proposed transfers of funds to resurvey the Pleasant Valley site on the Snake River in Idaho as contemplated in both the fiscal years 1957 and 1958 are disapproved. No funds are to be used for this purpose at anytime unless and until the item has been budgeted in the regular manner and approved the committee."

JUSTIFICATION

Explanation of amendment (1).—The amendment restores the $1,432,000 reduction made by the House in the budget estimate. This amount is for the following activity:

General investigations:

Appropriation, 1957	$5,680,000
Budget estimate, 1958	5,932,000
House allowance, 1958	4,500,000
Restoration requested	1,432,000

A breakdown of the restoration request by objects of expenditure follows:

01	Personal services	$1,025,500
02	Travel	57,000
03	Transportation of things	8,000
04	Communication services	8,500
05	Rents and utility services	7,000
06	Printing and reproduction	18,000
07	Other contractual services	105,000
	Services performed by other agencies	81,000
08	Supplies and materials	33,000
09	Equipment	26,000
11	Grants, subsidies, and contributions:	
	Contribution to retirement fund	62,000
13	Refunds, awards and indemnities	200
15	Taxes and assessments	800
	Total	1,432,000

The reduction for this activity will have serious effects on the Bureau's long-term program goals. With the population of the United States increasing at the rate of about 2.8 million people annually and current estimates of the population by 1975 ranging from 214 million to 221 million, it is readily evident that conservation of our water resources is going to be increasingly important. This not only will result in mounting competitive demand for the limited water

supply but as Mr. E. D. Williams, National Administrator of the Soil Conservation Service, pointed out in August 1956 this country loses annually some 1,100,000 acres of land to such modern developments as urban expansion, highways, and airports. For example, it has been estimated that the recently authorized national highway program will, by itself, take out of production over 4 million acres of production farmland within the next 15 years. This loss coupled with the yearly loss of 400,000 acres to the ravages of erosion and alkalinity means an annual deficit of 1½ million acres, according to Mr. Williams. If the Bureau, as the Federal agency having primary responsibility for water resources developments, is to play its part in meeting this challenge, it is essential that its program be geared to long-range goals now. The average water resources development project usually requires a minimum of 3 to 4 years of careful survey and planning to insure a sound and economically feasible project and to prepare a report thereon. After the Congress has reviewed the reports, authorized the project, and appropriated construction funds, several more years are required for construction purposes before water can be made available to farming. Thus, a potential project on which the planning is being initiated today will not make contribution to the Nation's needs for a minimum of about 6 years for the smaller projects, and from 10 to 15 years for the large projects. It is therefore essential that the program be reviewed in light of of the needs expected to prevail a few years in the future.

Accomplishment of these long-range goals will, of course, require a stable and efficient planning organization. Generally speaking the appropriations for the planning activity have fluctuated from year to year and, as the major portion of the funds are for personal services, the planning organization has varied in almost direct proportion. With each curtailment of funds valuable personnel with years of experience in the field of water resources are lost, only to be followed by new and inexperienced recruits with the subsequent increase in funds. It is essential that in the interest of efficient operations that the program be geared to stable, long-range program rather than carried forward on a day-to-day basis.

The $5,932,000 requested for the planning activity includes $250,000 for the Alaskan program all of which is financed from the general fund. One of the effects of the reduction, together with the amounts and sources of funds of the allowance made, is to reduce by $50,000 the amount for investigations in Alaska. The planning organization in Alaska is being held to an absolute minimum at the present time. Despite this, a sizable portion of the funds for the current fiscal year must be utilized for salaries of the small administrative staff, office rent, utilities, etc., with the result that the amount of funds available for actual fieldwork is limited and work is largely confined to 1 or 2 items. Restoration of the $50,000 is needed to provide for more efficient operations in the Territory of Alaska.

The fiscal year 1958 appropriation request also included $1,080,000 for continuation of the investigation of the gulf basin project in Texas with the expectation of completing a report on the project by the end of fiscal year 1960. The gulf basin project is a large multipurpose development involving over 1 million acres of land, flood control, municipal and industrial water for several major cities along the gulf coast as well as other benefits. This investigation will require in the neighborhood of $4 million to complete and the fiscal year 1958 request is based on carrying the work forward in the most efficient manner possible. The $180,000 reduction should be restored to permit the work to proceed as now scheduled and avoid a serious delay in the work.

With regard to the language in the House committee report concerning the controls on the program, it is absolutely essential that there be flexibility in that program if the funds and personnel are to be used effectively and efficiently. In any planning activity, it is obviously impossible to foresee 12 to 18 months in advance of the work the exact conditions that will be encountered in the field. For instance, subsurface geologic exploration at major structure sites may, and often do, reveal unforeseeable conditions which indicate the need for more or less foundation drilling than had been anticipated or, in exceptional instances, the complete abandonment of one site in favor of alternate possibilities. Furthermore, the planning program must be responsive to the wishes and interests of the States and the potential water users. The extent and direction of that interest is extremely difficult to evaluate in advance and often changes during the course of the studies. There must be sufficient flexibility in the application of the funds to meet these changing field conditions.

The House committee indicated a general awareness of the need for some flexibility but the restrictions imposed by the language in the report will make it impossible to utilize the available funds and personnel in an efficient manner. For instance, some 38 items are scheduled to be completed by June 30, 1957, but based on past experience, the work on several of those items probably will be unavoidably delayed and will require a small amount of funds the following fiscal year for final completion. The language in the report would prevent the use of any of the funds appropriated in fiscal year 1958 for the completion of these items. The language would also prevent the use of any fiscal year 1958 funds for detailed preconstruction studies on newly authorized projects in preparation for start of construction and would thus result in a delay of 1 year in the construction of most of those developments. On the larger studies, the limitation of 15 percent in the amount of funds that could be transferred to any item would not cause undue hardship but on those items involving relatively small amounts of funds, this limitation could also be too restrictive if conditions were encountered which resulted in a significant increase in cost.

Explanation of amendment (2).—The amendment increases to $5,182,000 the amount to be derived from the reclamation fund. The restoration requested is in line with amendment (1).

OPERATIONS AND MAINTENANCE ESTIMATE

Chairman HAYDEN. The budget estimate for operation and maintenance is $28,338,000. The House committee recommends the allowance of $28 million. The Department is not seeking restoration of this reduction.

The justifications will be included in the record.

(The justifications referred to follow:)

Operation and Maintenance

Allotments and funds advanced

State	Project	Allotments			Funds advanced			Total project		
		Actual, fiscal year 1957	Estimate, fiscal year 1958	Increase or decrease	Fiscal year 1957	Fiscal year 1958	Increase or decrease	Fiscal year 1957	Fiscal year 1958	Increase or decrease
Alaska	Eklutna	$255,000	$267,300	+$12,300				$255,000	$267,300	+$12,300
Arizona	Gila	462,130	473,400	+11,270	$94,838	$118,516	+$23,678	556,968	591,916	+34,948
Arizona-California	Imperial Dam	46,000	49,600	+3,600				46,000	49,600	+3,600
	Yuma	140,000	172,300	+32,300	33,250	36,000	+2,750	173,250	208,300	+35,050
Arizona-California-Nevada	Colorado River front work and levee system.	1,285,000	1,563,900	+278,900				1,285,000	1,563,900	+278,900
	Parker-Davis	2,188,860	2,296,300	+107,440	170,075	163,250	−6,825	2,358,935	2,459,550	+100,615
Arizona-Nevada	Boulder Canyon	1,470,000	1,407,900	−62,100				1,470,000	1,407,900	−62,100
	Boulder City, Nev	645,000	636,700	−8,300				645,000	636,700	−8,300
California	Cachuma	70,000	58,100	−11,900				70,000	58,100	−11,900
	Central Valley	5,125,000	5,325,300	+200,300				5,125,000	5,325,300	+200,300
	Kings River	12,000	7,800	−4,200		7,500	+7,500	12,000	15,300	+3,300
Colorado	Colorado-Big Thompson	876,540	623,500	−303,040		189,100	+189,100	876,540	812,600	−113,940
	San Luis Valley	8,000	8,000					8,000	8,000	
Idaho	Palisades	176,600	424,300	+247,700				176,600	424,300	+247,700
Idaho-Oregon	Boise	327,000	333,900	+6,900	40,000	43,600	+3,600	367,000	377,500	+10,500
Idaho-Wyoming	Minidoka	683,000	842,500	+159,500	154,500	145,900	−8,600	837,500	988,400	+150,900
Montana	Hungry Horse	422,000	494,200	+72,200				422,000	494,200	+72,200
	Milk River	2,600	2,600		38,400	35,800	−2,600	41,000	38,400	−2,600
Nebraska-Wyoming	North Platte	179,000	193,000	+14,000	90,000	103,500	+13,500	269,000	296,500	+27,500
New Mexico	Carlsbad	3,000	3,750	+750	9,000	8,250	−750	12,000	12,000	
	Middle Rio Grande	220,000	257,000	+37,000	823,100	[1] 858,400	+35,300	1,043,100	1,115,400	+72,300
New Mexico-Texas	Rio Grande	788,000	471,490	−316,510	759,000	1,006,800	+247,800	1,547,000	1,478,290	−68,710
Oklahoma	W. C. Austin	2,040	2,060	+20	6,260	6,340	+80	8,300	8,400	+100
Oregon-California	Klamath	395,000	48,700	−346,300	57,000	103,000	+46,000	452,000	151,700	−300,300
Texas	Falcon	10,000	10,000					10,000	10,000	
Utah	Provo River		14,800	+14,800	8,123	7,300	−823	8,123	22,100	+13,977
Washington	Columbia Basin	4,162,000	4,389,600	+227,600				4,162,000	4,389,600	+227,600
	Yakima	56,000	113,700	+57,700	502,500	538,700	+36,200	558,500	652,400	+93,900
Wyoming	Kendrick	284,000	276,600	+42,600		5,000	+5,000	284,000	281,600	+47,600
	Riverton	114,000	123,600	+9,600				114,000	123,600	+9,600
	Shoshone	195,600	206,700	+11,100	5,400	4,400	−1,000	201,000	211,100	+10,100
Various	Missouri River Basin project	5,752,030	6,181,200	+429,170	6,800	5,700	−1,100	5,758,830	6,186,900	+428,070
	Soil and moisture	836,600	982,400	+145,800				836,600	982,400	+145,800
	Halovzeton	75,000	75,800	+800				75,000	75,800	+800
	Projects financed entirely with funds advanced				173,595	217,730	+44,135	173,595	217,730	+44,135
	Total	27,267,000	28,338,000	+1,071,000	2,971,841	3,604,786	+632,945	30,238,841	31,942,786	+1,703,945

[1] Includes $57,100 in fiscal year 1957 and $75,400 in fiscal year 1958 advanced by the State of New Mexico.

Itemization of estimate

	Estimate 1957	Estimate 1958	Increase (+) or decrease (−)
Program and financing:			
Total obligations	$30,181,741	$31,867,386	+$1,685,645
Non-Federal funds advanced by water users:			
Unobligated balance brought forward	−1,140,765	−1,140,765	
New advances	−2,914,741	−3,529,386	−614,645
Unobligated balance carried forward	1,140,765	1,140,765	
Appropriation	27,267,000	28,338,000	+1,071,000
Obligations by objects:			
01 Personal services	18,588,897	19,370,609	+781,712
02 Travel	420,891	419,913	−978
03 Transportation of things	123,426	117,743	−5,683
04 Communication services	256,752	258,458	+1,706
05 Rents and utility services	540,944	509,631	−31,313
06 Printing and reproduction	31,303	32,467	+1,164
07 Other contractual services	5,019,923	5,364,281	+344,358
Services performed by other agencies	337,864	413,390	+75,526
08 Supplies and materials	3,334,464	2,881,775	−452,689
09 Equipment	1,291,061	1,255,650	−35,411
10 Lands and structures	736,150	600,144	−136,006
11 Grants, subsidies and contributions: Contribution to retirement fund		1,150,650	+1,150,650
13 Refunds, awards, and indemnities	6,055	5,515	−540
15 Taxes and assessments	54,512	55,932	+1,42
Subtotal	30,742,242	32,436,158	+1,693,916
Deduct charges for quarters and subsistence	560,501	568,772	−8,271
Total obligations	30,181,741	31,867,386	+1,685,645

Appropriations

1948	$8,691,500
1949	10,631,454
1950	13,648,172
1951	15,447,000
1952	15,977,594
1953	19,000,000
1954	19,500,000
1955	21,500,000
1956	24,750,000
1957	27,267,000

AMOUNT REIMBURSABLE

Chairman HAYDEN. How much of the total appropriated for "Operation and maintenance" is reimbursable through power receipts or payments from water users?

Mr. DEXHEIMER. I have a tabulation, Mr. Chairman, which I would like to submit for the record. The reimbursable amount of the fiscal 1958 request would be $25,089,480; nonreimbursable, $3,248,520, or a total of $28,338,000, and with the reduction of the $338,000 made by the House committee on which we are not asking for restoration, that would be reduced to $28 million even.

The details of that are here, if you would like to have those for the record.

Chairman HAYDEN. I would like to have those in the record.

(The table referred to follows:)

1 Includes $57,100 in fiscal year 1957 and $75,400 in fiscal year 1958 advanced by the State of New Mexico.

BUREAU OF RECLAMATION

OPERATION AND MAINTENANCE, FISCAL YEAR 1958

Breakdown by functions of appropriation allocated between reimbursable and nonreimbursable

Function	Reimbursable	Nonreimbursable	Total
Irrigation	$5,865,950		$5,865,950
Power	18,178,840		18,178,840
Flood control		$487,750	487,750
Municipal and industrial water	309,990		309,990
Fish and Wildlife		7,900	7,900
Recreation		11,170	11,170
Town of Coulee Dam	168,000		168,000
Other operation and maintenance activities:			
Boulder City municipality, Nevada	566,700	70,000	636,700
Imperial Dam		49,600	49,600
Colorado River front work and levee system		1,563,900	1,563,900
Soil and moisture operations		982,400	982,400
Halogeton operations		75,800	75,800
Total appropriation	25,089,480	3,248,520	28,338,000

AMENDMENT REQUESTED

Chairman HAYDEN. I understand that you are requesting an amendment that is technical in nature. It involves an adjustment in the funds to be derived from the reclamation fund; does it not?

Mr. DEXHEIMER. That is correct, Mr. Chairman.

Chairman HAYDEN. The formal amendment will be included in the record at this point.

(The matter referred to follows:)

BUREAU OF RECLAMATION

OPERATION AND MAINTENANCE

Appropriation, 1957	$27,267,000
Estimate	28,338,000
House allowance	28,000,000
Restoration requested	

(P. 10, line 15)

Amendment requested:

Page 10, line 15, strike out "$22,860,000" and insert in lieu thereof "$22,740,000", a decrease of $120,000 in the amount to be derived from the reclamation fund.

HOUSE REPORT

"Appropriation, 1957	$27,267,000
Estimate, 1958	28,338,000
Recommended, 1958	28,000,000
Comparison:	
Appropriation, 1957	733,000
Estimate, 1958	−338,000

"The committee recommends an appropriation of $28 million, a decrease of $338,000 in the budget estimate but an increase of $733,000 above the amount appropriated for fiscal year 1957. The irrigation district on the Gila project will take over operation and maintenance on this project in January 1958, which eliminates the need for $120,000 of Federal funds programed for this purpose. The remainder of the reduction should not disturb the effectiveness of the program."

JUSTIFICATION

The amendment reduces by $120,000 the amount to be derived from the reclamation fund. This is in line with the reduction of $120,000 made by House committee on the Gila project. This should be reflected in the amount to be derived from the reclamation fund instead of the general fund as indicated by the House committee bill.

GENERAL ADMINISTRATIVE EXPENSES

Chairman HAYDEN. The budget estimate for "General administrative expenses is $4,242,000. The House committee recommended an allowance of $4 million—a reduction of $242,000. The Department is requesting restoration of the reduction. I will place the justifications in the record, and you may give your estimate on that.

(The justifications referred to follow:)

BUREAU OF RECLAMATION

General administrative expenses

Appropriation act, 1957	$3,942,000
Total available, 1957	3,942,000
Increase in base due to Government's contribution to the retirement fund	222,000
Adjusted appropriation	4,164,000
Decreases: None	
Base, 1958	4,164,000
Increases:	
Commissioner's offices in Washington, D. C., and Denver, Colo.	31,100
Regional offices	46,900
Total increases	78,000
Budget estimate, 1958	4,242,000

Analysis of adjusted appropriation

Activity	Total available, 1957	Increase in base due to Government's contribution to the retirement fund	Adjusted appropriation
1. Commissioner's offices in Washington, D. C., and Denver, Colo.	$2,239,900	$122,000	$2,361,900
2. Regional offices	1,702,100	100,000	1,802,100
Total	3,942,000	222,000	4,164,000

Analysis by activities

Activities	Adjusted appropriation	Decreases	Base, 1958	Estimate, 1958	Increases
1. Commissioner's office in Washington, D. C., and Denver, Colo.	$2,361,900		$2,361,900	$2,393,000	$31,100
2. Regional offices	1,802,100		1,802,100	1,849,000	46,900
Total	4,164,000		4,164,000	4,242,000	78,000

GENERAL STATEMENT

The Bureau is requesting an appropriation of $4,242,000 to finance its general administrative expenses during fiscal year 1958. Of this amount, $222,000 represents the Bureau's contribution to the civil service retirement fund as required by Public Law 854, 84th Congress. Excluding this contribution, the request totals $4,020,000. This is $78,000 more than was appropriated for fiscal year 1957, an increase of less than 2 percent. This increase is required to meet increases in travel costs and other minor increases incident to rising prices. No increase in personnel is contemplated.

The importance of this appropriation to the Bureau is measured by the scope of its three major programs. In fiscal year 1958 the Bureau will administer a construction and rehabilitation program on 75 projects and Missouri River Basin units, an investigation program for some 134 projects including Missouri River Basin units and participating projects on the Colorado River storage project, and operation and maintenance of 54 projects and Missouri River Basin units. In addition, there are 68 completed projects operated in whole or in part by the water users.

The steady growth of reclamation in the Western States places upon the Bureau increasing responsibilities for proper supervision of these expanding facilities and adequate protection of the Federal investment. At the present time, the Bureau is responsible for the protection of a Federal investment in completed facilities valued at close to $3 billion and, with a continuing construction program of over $150 million a year, this responsibility is rapidly increasing. Because of the increasing burden entailed in the operation and maintenance of this expanded physical plant, general administration requirements are actually greater than can be financed from the "General administrative expenses" appropriation under the present limited concept and scope of this appropriation. As indicated above, there are 86 completed projects operated in whole or in part by the water users. Liaison with the water users' organizations and management review of their operations is a Bureau responsibility. Some 414 power-marketing contracts were in existence on December 1, 1956, and 171 more are in the process of negotiation. Under these contracts, the Bureau markets more kilowatt-hours of electricity per year than any other single organization in the world.

The performance of these general overall management-type functions is a proper charge against the "General administrative expenses" appropriation. In fact such operation and maintenance administration costs are specifically authorized in the administrative provisions of the Bureau's annual appropriation language. These general functions are nonreimbursable, not being for the benefit of a particular project, but to enable the management organization of the Bureau to exercise properly its responsibility for safeguarding the Federal investment in reclamation.

Functions and activities properly chargeable to this appropriation are:

1. Direction of the several programs of the Bureau.
2. Determination of policy standards and requirements for performance of the Bureau's programs.
3. Development of procedures for review and control of the Bureau's program.
4. Overall supervision of methods and objectives of work execution activities.
5. Coordination of the overall phases of the Bureau's engineering and administrative activities.
6. Coordination of the Bureau's programs with the programs of other agencies, public and private, having interests in the same areas of conservation and resource development.
7. Management review of projects turned over to the water users.

On the basis of the above criteria for determining general administrative expenses, the office of the Commissioner in Washington falls entirely under this appropriation. Some of the organizations and functions of the Commissioner's office in Denver are of such character that they, too, come under general administration. At the regional office level general administrative work constitutes an important part of the service performed by the headquarters staff.

Commissioner's Office in Washington and Denver

The estimate of $4,242,000 includes $2,393,000 for allocation to the Commissioner's office in Washington, D. C., and Denver, Colo. Of this amount, however, $122,000 is required to pay for the Government's share of the contribution to the civil-service retirement fund. Excluding this differential the increase over 1957 is $31,100. This increase is required to meet an increase in travel costs and other minor increases incident to rising costs. No increase in positions is contemplated.

The major portion of the expense required to maintain the Commissioner's office in Denver, Colo., is incurred in rendering technical assistance and services to field offices, projects, and activities, and is financed separate and apart from the "General administrative expense" appropriation. In fiscal year 1958, as heretofore, these services will be financed by transfer of funds from project and activity allotments on a program basis. The obligations for these transfers are included on the project schedules. A majority of such funds will be transferred from the "Construction and rehabilitation" appropriation, although some funds will be transferred from the "Operation and maintenance" and "General investigations" appropriations. The advance of funds will be based on the project or activity program that governs the amount of planning, design, laboratory analysis, and related work which the Denver office will be required to perform for each such project or activity.

Bureau construction often is of a scale which requires the engineering design work to extend over a period of years. The activities of the Denver offices, therefore, do not tie directly to the construction program in the field for any given fiscal year. Design work usually precedes construction by a year or more. Year to year increases or decreases in the Bureau's field programs are reflected in Denver only in partial ratio in any given year. Work to be performed in the Denver offices during fiscal year 1958 other than that charged to general administrative expenses is estimated at $10,891,000.

Regional offices

The regional offices estimate for general administrative expenses for fiscal year 1958 is $1,849,000 of which $100,000 represents the Government's contribution to the civil-service retirement fund. Excluding this amount the increase over fiscal year 1957 is $46,900. This increase is required to finance activities relating to the administration of contracts covering irrigation facilities that have been turned over to the water users during fiscal years 1956 and 1957.

In addition to these administrative responsibilities of the regional office there are certain types of work required for the direct benefit of a project or other activity which is performed more economically and efficiently on a centralized basis. Where circumstances permit and to avoid duplication of project office staffs the Bureau maintains centralized organizations for the performance of such work. By this means the Bureau can supply the skilled services required in the various technical fields at reasonable costs to the several projects or activities controlled by the central office.

Since the centralized project activity work is performed for the direct benefit of projects, such work is financed through advances from those project allotments financing the work programed, and the obligations for which are included on the schedules of such projects.

Work of this nature to be performed during fiscal year 1958 is estimated at $5,276,300.

GENERAL ADMINISTRATIVE EXPENSES

Appropriations

1948	$3,130,000	1953	$5,250,000
1949	3,868,582	1954	4,500,000
1950	4,365,100	1955	4,000,000
1951	6,864,000	1956	3,760,000
1952	5,478,203	1957	3,942,000
3d supplemental, pay	300,000		

Itemization of estimate

	Estimate, 1957	Estimate, 1958
Program and financing:		
Total obligations	$3,942,000	$4,242,000
Appropriation	3,942,000	4,242,000
Obligations by objects:		
01 Personal services	3,446,501	3,523,308
02 Travel	230,331	232,778
03 Transportation of things	15,625	14,875
04 Communication services	72,410	73,488
05 Rents and utility services	5,605	5,305
06 Printing and reproduction	21,555	22,090
07 Other contractual services	47,395	43,694
Services performed by other agencies	27,775	28,850
08 Supplies and materials	38,063	38,847
09 Equipment	32,390	32,395
11 Grants, subsidies and contributions: Contribution to retirement fund		222,000
13 Refunds, awards, and indemnities	3,950	3,960
15 Taxes and assessments	400	410
Total obligations	3,942,000	4,242,000

CIVIL SERVICE RETIREMENT CONTRIBUTIONS

Chairman HAYDEN. As I understand the justifications, $222,000 of the increase in the budget estimate over the amount appropriated for the current years is to meet the Government's contribution to the civil-service retirement fund. Is that correct?

Mr. CROSTHWAIT. That is correct, sir.

Chairman HAYDEN. Would you comment on the $78,000 that represents an increase in program?

RESIDUE OF INSPECTION WORK

Mr. CROSTHWAIT. That $78,000 requested is primarily to take care of ingrade promotions and to move three persons from construction funds for projects that are now turned over to water users. We have a residue of work such as keeping the accounts and doing the inspection to insure that the works are maintained in accordance with proper standards. That $78,000 additional request is primarily for that purpose.

Chairman HAYDEN. That is a very important purpose. I know that, for example, on the Salt River project, inspection was made of a diversion dam and it was found to be in very serious condition and ascertained that it might go out. The local engineers had not discovered it. When it was discovered, the matter was immediately taken up and fixed. There are bound to be such instances throughout the United States on many projects. I think it is money well spent.

PERSONNEL REQUESTS

How many employees do you have in the Bureau of Reclamation?

Mr. CROSTHWAIT. We have approximately 10,000 total.

Chairman HAYDEN. How many new positions are proposed in the budget for fiscal 1958?

Mr. GOLZE. The total number of positions spoken of in the budget presentation was 12,194 as compared to 12,088 in 1957, which would be an increase of about 100. They are positions, sir, not man-years.

Chairman HAYDEN. How does the present number of employees compare with the number of employees during the last 4 or 5 years?

Mr. DEXHEIMER. Mr. Chairman, in January 1953 we had 13,348 full-time personnel on our payrolls. By January 1954 the number was reduced to 10,536 when we went through a drastic reduction in force shortly after I took over this job.

That figure was further reduced so that by January 1955 there were 9,273. In January 1956 our total personnel stood at 9,417, and our estimate for 1957 is about 10,000. We are doing a great deal more work and we have a great deal more work contemplated. We will need to put on a few more employees.

Chairman HAYDEN. You have this upper Colorado River project and a lot of new construction going on.

Mr. DEXHEIMER. We have not only that, but we have quite a few other rather large new projects for both the planning and construction that require additional personnel in order to carry them on efficiently.

PERSONNEL REDUCTIONS IN RECLAMATION

I might point out that reductions in 1954 and 1955 resulted in something like $16 million in saving in payroll in the Bureau of Reclamation. I would also like to point out that, while we have been reducing our payrolls, nearly every other agency of the Government has been increasing them, while the Bureau of Reclamation was making a reduction of 3,000.

Senator DWORSHAK. Are you not afraid you will lose your job?

Mr. DEXHEIMER. No, sir; but I am trying to do it efficiently, Senator Dworshak, and I believe we are doing more work, with some 3,000 less employees, than we were doing at that time.

Senator DWORSHAK. You are deserving of commendation for that.

Mr. DEXHEIMER. Thank you, sir.

PURCHASE OF AIRPLANE

Chairman HAYDEN. I notice in the House report that $100,000 of the reduction in general administrative expenses was for the purchase of an airplane.

Airplanes are not purchased from these funds are they?

Mr. CROSTHWAIT. No, sir. That aircraft was intended to be purchased from C. and R. funds not from general administrative expenses.

Chairman HAYDEN. What funds did you say?

Mr. CROSTHWAIT. Construction and rehabilitation funds. It would not have been paid for from these funds.

Chairman HAYDEN. It will be charged to the cost of construction.

Mr. CROSTHWAIT. That is correct, and would be reimbursed.

Chairman HAYDEN. What type of plane do you plan to purchase? Can you explain the need?

Mr. CROSTHWAIT. This particular aircraft which was disallowed was intended for use at our region 7 to be jointly used by our region 7 and our general engineering office in Denver. We had in mind a small twin-engine aircraft that we would use for the survey work and for moving our engineers as we quite frequently have to throughout this area. We have a small landing strip out at the Federal center where we now have our offices located.

We feel that it would be quite economical to have that sort of transportation available. We feel that it is essential that we have a small twin-engine aircraft because of the terrain out there. As you know, it is pretty mountainous and the safety factor there is, we think, essential to use the twin-engine plane rather than a single-engine aircraft.

COMPLETE COST OF PLANE

Chairman HAYDEN. What would it cost?

Mr. CROSTHWAIT. It would cost approximately $100,000 when you equip it with the necessary radio and navigation facilities. We have estimated that its operation would be cheaper than the usual means of transportation when you take into account the time saved and the engineers involved that would be using it.

Chairman HAYDEN. Private industry found that to be true so far as moving their forces around in a supervisory capacity.

Mr. CROSTHWAIT. That is correct, sir.

CAR PURCHASES

Chairman HAYDEN. The budget recommended authority to permit the Bureau of Reclamation to purchase 177 passenger-carrying vehicles, of which 175 were for the replacement of existing vehicles.

The House committee recommends authority to purchase only 127, all of which are for replacement of existing vehicles.

Will you comment on the size of the existing fleet of vehicles, and then give the need for the two additional vehicles requested?

Mr. CROSTHWAIT. During the last several years we reduced our fleet of passenger-carrying vehicles very materially, and the request here was for the replacement of those where we have found that their operating expenses, because of their age and mileage, was getting excessive.

All the replacements we asked for are within the replacement standards that have been established by the General Services Administration. The additional passenger vehicles were primarily buses that we were planning to use on the upper Colorado for the movement of people from the camp site to the work site. We think that we can do it more economically that way rather than having either station wagons or other means to take those survey crews from the camp site to the work operations and the additional vehicles were primarily for that purpose plus an ambulance that we wanted to put on the Navaho site where there is no hospital facility.

Chairman HAYDEN. That is right. That is in a very isolated spot.

Mr. CROSTHWAIT. It is very isolated and we felt that we ought to have an ambulance at that location.

Chairman HAYDEN. So that if a man is hurt you can get him out to get attention.

Mr. CROSTHWAIT. That is correct, sir.

Chairman HAYDEN. What would be the cost of such an ambulance?

Mr. CROSTHWAIT. Probably somewhere in the neighborhood of $5,000.

STATUS OF COLORADO RIVER PROJECTS

Senator DWORSHAK. Mr. Dexheimer, in your budget request of more than $25 million for the Colorado River project, you list the Flaming

Gorge unit, Utah; Glen Canyon in Arizona and Utah; and the Navaho unit in Arizona and New Mexico. Are those three large dams being built now?

Mr. DEXHEIMER. The contract is being let for the Glen Canyon. We would expect to let the contract for the Flaming Gorge early next year. The Navaho contract would also be let late in the fiscal year 1958. Those are the main large storage reservoirs that are authorized for the upper Colorado at the present time.

Senator DWORSHAK. Is there any power generation involved in any of these three?

POWER GENERATION

Mr. DEXHEIMER. There would be in all except the Navaho. Both Glen Canyon and Flaming Gorge have power installations.

Senator DWORSHAK. The Government will construct those?

Mr. DEXHEIMER. Yes, sir.

Senator DWORSHAK. The transmission division is asking for money obviously for planning to provide transmission lines to take care of that power when it is available.

Mr. DEXHEIMER. Well, the planning is to at least interconnect the powerplants that we will have and, of course, anticipating that we may have the Curecanti unit, which would also be a power-producing service of dams. We would want to interconnect that, too. We do not know at this time what other lines might be necessary.

Senator DWORSHAK. How many water-storage projects are contemplated in the Colorado River Basin?

Mr. DEXHEIMER. Those 4 are the main storage units. There are, in addition, 12 participating projects which will have some storage for the irrigation works in connection with them, of course.

Senator DWORSHAK. The main projects are Flaming Gorge, Glen Canyon, Navaho and what was the fourth?

Mr. DEXHEIMER. Curecanti in Colorado. In addition, there would probably be some power development in the Central Utah project, the ultimate phase when it is developed.

Senator DWORSHAK. Those are on the main stem of the river. These four are on the main stem of the river?

Mr. DEXHEIMER. The Glen Canyon is the only one on the main stem of the Colorado River. The Flaming Gorge on the Green, the Navaho on the San Juan in New Mexico, and the Curecanti on the Gunnison in Colorado.

AMENDMENTS REQUESTED

Chairman HAYDEN. The Department's requested amendments pertaining to "General administrative expenses" and "Administrative provisions" will be included in the record.

(The matter referred to follows:)

BUREAU OF RECLAMATION

GENERAL ADMINISTRATIVE EXPENSES

(House hearings, pt. 2, pp. 446–452)

Appropriation, 1957	$3,942,000
Estimate	4,242,000
House allowance	4,000,000
Restoration requested	242,000

(P. 11, line 7)

Amendment requested:

Page 11, line 7, strike out "$4,000,000" and insert in lieu thereof "$4,242,000", the estimate, or an increase of $242,000 in the appropriation.

HOUSE REPORT

"Appropriation, 1957	$3,942,000
Estimate, 1958	4,242,000
Recommended, 1958	4,000,000
Comparison:	
Appropriation, 1957	+58,000
Estimate, 1958	−242,000

"The budget estimate for the activities under this heading is $4,242,000. In making the reduction the committee has disallowed 1 of the 2 airplanes requested. This accounts for $100,000 of the reduction."

JUSTIFICATION

The amendment restores the $242,000 reduction made by the House in the budget estimate. This amount is for the following activity:

General administrative expenses:	
Appropriation, 1957	$3,942,000
Budget estimate, 1958	4,242,000
House allowance, 1958	4,000,000
Restoration requested	242,000

A breakdown of the restoration request by objects of expenditure follows:

01	Personal services	$200,800
02	Travel	13,300
03	Transportation of things	900
04	Communication services	4,200
05	Rents and utility services	300
06	Printing and reproduction	1,300
07	Other contractual services	2,500
	Services performed by other agencies	1,700
08	Supplies and material	2,200
09	Equipment	1,900
11	Grants, subsidies and contributions:	
	Contribution to retirement fund	12,700
13	Refunds, awards and indemnities	200
	Total	242,000

The Bureau is requesting an appropriation of $4,242,000 to finance its "General administrative expenses" during fiscal year 1958. This is an increase of $78,000 over the amount appropriated for 1957 after provision for transfer of $222,000 to the civil service retirement fund as required by Public Law 854, 84th Congress. This increase, which is less than 2 percent, is required to meet increased personal services costs due to transfer of 3 field employees formerly paid from other funds to the "General administrative expense" rolls and to pay automatic promotions plus minor increases incident to rising costs and increased physical plant for which the Bureau is responsible.

A reduction of $242,000 below the amount approved by the President would place a serious handicap upon the Bureau since that would put the allowance for actual administrative functions $164,000 below the current year's appropriation. With such a reduction it would not be possible to provide the kind of supervision and direction over the Bureau's programs as is warranted by the importance of the work with which it is charged. While the House has indicated that $100,000 of the reduction is due to the elimination of one aircraft it is pointed out that the approved budget does not call for the purchase of an aircraft out of the general administrative expenses appropriation. The proposed purchase of both airplanes included in the budget is to be made from construction funds.

ADMINISTRATIVE PROVISIONS

(House hearings, pt. 2, pp. 453–457)

(P. 12, line 11)

Amendment requested:

Page 12, line 11 after the word "of" strike out the word "one" and insert in lieu thereof the word "two" and after the word "aircraft" insert "of which one is."

HOUSE REPORT

No comment in House Report under "Administrative provisions," however the following comment was made under "General administrative expenses":

"* * * In making the reduction the committee has disallowed 1 of the 2 airplanes requested. This accounts for $100,000 of the reduction."

JUSTIFICATION

The House committee allowed purchase of 1 aircraft of the 2 requested in the budget. It is planned to use the one allowed in region 4 primarily in connection with the Colorado River storage project.

There is a requirement to serve both region 7 and the Assistant Commissioner and Chief Engineer's office with air transportation, and it is requested that the authorization be restored to purchase an 8-place, 2-motor aircraft, in addition to the one allowed by the House, capable of direct flight over mountainous country, at a cost estimated at $100,000. The estimated use—1,200 hours annually.

The two-motor plane requested will be based at Denver, Colo. The primary purpose of this plane will be to facilitate Bureau activities such as the development and protection of water resources in region 7 comprised of the States of Wyoming, Colorado, Nebraska, and Kansas.

The generation and distribution of hydroelectric power has been integrated in regions 6 and 7 covering all States in the entire Missouri River Basin. Problems arising in this field frequently required trips within that area by region 7 engineering personnel for the spot decisions as to remedial repairs and rerouting of power.

Very frequently engineering conferences on basin development in cooperation with States and other agencies are required at field locations during flood and other unusual weather causing emergency conditions which threaten Bureau installations and facilities. Many such areas are remote and only infrequently served by commercial transportation. Time is of essence and Bureau transportation for immediate use in required. The lack of such immediate air transportation has caused serious delays and in some instances personal contracts by engineering forces have had to be foregone. Small but adequate landing facilities in the areas will permit visits by regional representatives and other Bureau staff personnel by use of such a plane and facilitate the necessary contacts in minimum time and at minimum expense.

Planning and construction activities in the four-State area of Wyoming, Colorado, Nebraska, and Kansas are region 7 responsibilities and are closely coordinated with region 6 in the development of the Missouri River Basin project. Frequent engineering conferences with officials of States and other agencies on the coordination and development of basin plans are required, and the immediate availability of an aircraft such as is herein requested would facilitate the maintenance of close contacts necessary for the proper and economical prosecution of the work program.

The advantages of having this aircraft based at Denver will be extended to the Assistant Commissioner and Chief Engineer and his professional staff. This office is responsible for the design and contract administration for Bureau programs in the 17 Western States. There are frequent instances where immediate departure of engineers to the field is necessary for contacts with contractors and field construction engineers over emergency conditions and to observe flood or other developments requiring immediate remedial action. There will be an increased necessity for such conferences and travel because of the added responsibilities created by the construction starts in the upper Colorado River project, in such isolated regions as where the Glen Canyon, Flaming Gorge, and Navajo Dams and Reservoirs are being constructed. Scheduled commercial transportation direct to these locations is nonexistent and travel by other commercial carriers is too time consuming.

CONSTRUCTION AND REHABILITATION

Chairman HAYDEN. We now come to construction and rehabilitation. The budget estimate is $135,658,000. The House committee recommended an appropriation of $113,046,223, a reduction of $22,611,777. The Department is requesting a restoration of $7,225,000 of the reduction.

The Department's comments on the action of the House committee will be included in the record at this time.

(The material referred to follows:)

BUREAU OF RECLAMATION

CONSTRUCTION AND REHABILITATION

Appropriation 1957	$143,975,500
Estimate	135,658,000
House allowance	113,046,223
Restoration requested	7,225,000

(P. 8, line 24)

Amendment requested:

Page 8, line 24, strike out "$113,046,223" and insert in lieu thereof "$120,271,223", an increase of $7,225,000 in the appropriation.

HOUSE REPORT

"Appropriation, 1957	$143,975,500
Estimate, 1958	135,658,000
Recommended, 1958	113,046,223
Comparison:	
Appropriation, 1957	−30,929,277
Estimate, 1958	−22,611,777

"The funds recommended for the projects and activities covered by this appropriation are distributed as follows:

"State and project	
"Arizona: Gila project	$869,000
Arizona-California-Nevada: Parker-Davis project	792,000
California:	
Central Valley project	
Less Trinity River division	5,773,400
Trinity River division	17,107,600
Santa Maria project	5,627,000
Solano project	3,672,000
Ventura River project	12,000,000
Colorado:	
Collbran project	2,000,000
Colorado-Big Thompson project	549,000
Idaho:	
Little Wood River project	400,000
Michaud Flats project	1,297,000
Minidoka project, North Side pumping division	1,465,000
Palisades project	1,500,000
Montana-North Dakota: Fort Peck project	645,000
New Mexico: Middle Rio Grande project	3,758,000
Oklahoma: Washita Basin project	3,500,000
Oregon:	
Crooked River project	850,000
Rogue River project, Talent division	6,041,000
Wapinitia project	400,000
Utah:	
Provo River project	574,000
Weber Basin project	6,500,000

"*State and project*—Continued	
Washington:	
Chief Joseph Dam project, Foster Creek division	$1,138,000
Columbia Basin project	13,850,000
Yakima project, Roza division	697,000
Wyoming:	
Eden project	875,000
Shoshone project	544,000
Drainage and minor construction program	893,000
Rehabilitation and betterment of existing projects	3,530,000
Missouri River Basin project:	
Bostwick division, Nebraska-Kansas	1,471,000
Frenchman-Cambridge division, Nebraska	3,260,000
Glendo unit, Wyoming	9,951,000
Helena Valley unit, Montana	4,500,000
Kirwin unit, Kansas	1,435,000
Owl Creek unit, Wyoming	1,100,000
Sargent unit, Nebraska	313,000
Transmission division, various States	8,000,000
Webster unit, Kansas	1,000,000
Drainage and minor construction program	791,000
Missouri River Basin investigations	2,000,000
Other Department of the Interior agencies	2,500,000
Total, construction and rehabilitation	133,168,000
Reduction offset by available unobligated balances	−20,121,777
Total appropriation	113,046,223

"*Boulder Canyon project.*—A total of $813,923 is available as an unobligated balance on this project. These funds were contemplated for beginning construction of unit N–8 in the Hoover powerplant. There is still no agreement between Los Angeles and Nevada for sharing the use of this generator. Until such agreement is arrived at there will be no use for these funds. They are to be allotted for use on other budgeted projects and the total amount of new funds requested for 1958 has been reduced by this amount.

"*Central Valley project, California.*—The budget reduction of $2,265,000 on the project consists of $888,000 of the amount programed for the Friant-Kern distribution system and $1,377,000 programed for the Corning Canal.

"The funds disallowed for the Friant-Kern distribution system were for construction in an area which has class 6 lands dispersed within it, and the Secretary is unable to certify such lands are susceptible to irrigation. While the irrigation district may be willing to proceed as it has suggested, and assume the repayment risk, it does not appear to the committee that Government funds should be invested in such a speculative manner.

"With respect to the Corning Canal distribution system the State Securities Commission has turned down a request for approval of a repayment contract because of the 160-acre limitation which it contained. The Bureau of Reclamation has no authority to execute contracts without this limitation and funds will not be needed for the Corning Canal until all legal questions are settled with respect to the 160-acre limitation.

"*Colorado-Big Thompson project.*—The funds provided for 1958 are for completion of the project.

"*Columbia Basin project-Esquatzel diversion canal.*—The committee directs that the funds budgeted for 1958 be utilized to initiate construction of the Esquatzel diversion canal with a capacity of 5,300 second-feet rather than 1,000 second-feet as originally planned. The Corps of Engineers testified that the larger canal, which will provide a drainage outlet to the Columbia River, would eliminate, at a saving of almost $3 million, the necessity of constructing a 30-foot levee to provide flood protection in the vicinity of Pasco, Wash.

"*Loan program—Distribution systems.*—The committee has disallowed the entire budget request of $7,700,000 and in addition directs the Bureau to apply $1,500,000 of the existing unobligated funds for this program to other budgeted projects. A reduction in new funds has been applied to compensate for the application of this carryover balance.

"There are currently available $14,600,000 of previously appropriated funds for this program, after taking into account the adjustment made by the com-

mittee. This amount will provide $12,700,000 required for the Solano contract and $1,900,000 required for the 1958 advance on the Terra Bella project should a contract with the irrigation district come into being during the fiscal year 1958. Language has been included in the bill to provide for annual partial payments on loan contracts not yet approved by the Secretary.

"*Ainsworth unit, Nebraska.*—The budget estimate of $1,100,000 for this project has been disallowed. Testimony received by the committee indicates that an increase in income of $53.92 per acre will result through application of irrigation water to the land. The repayment contract requires only $8.82 per acre, leaving more than 70 percent of the total irrigation repayment allocation to be made up from Missouri River Basin power revenues. The committee continues to be concerned about the amount of irrigation repayment obligations being loaded on the income from the sale of power in the basin. In the case of this particular project the committee fails to understand why more favorable repayment contracts requiring a larger repayment on the part of the beneficiaries of irrigation cannot be arranged. This is a new construction start which can be delayed pending an examination of the possibility of an increase in the repayment by the irrigation beneficiaries.

"*Cedar Bluff unit, Kansas.*—The budget estimate of $50,000 was to begin construction of a new unit of an existing project. The economic analysis of this unit which was presented to the committee was based on irrigation of 11,000 acres. It was testified that the present proposal for which the economic analysis had not been adjusted includes only 6,000 acres and there has been no irrigation district formed as yet. In view of these facts, committee does not feel that the project is ready to proceed.

"*Farwell unit, Nebraska.*—The budget request of $750,000 for this new construction start has been disallowed principally on the basis that the benefit-cost ratio when figured on the criteria established by the Bureau of the Budget is only 0.53 to 1. In addition the power revenues of the Missouri River Basin project are expected to carry more than 60 percent of the repayment costs applicable to irrigation.

"*Shoshone extensions unit, Wyoming.*—At the time of the hearings the Bureau testified that the $500,000 budgeted for this project should be deleted since there is at the present time on local interest in it.

"*Yellowtail unit, Montana.*—There is available on this project, from previous appropriations, a total of $3,307,854. Legislation requiring that the Indian owners of land in the project area be paid $5 million for their lands was vetoed by the President. New legislation with respect to this matter is pending. The project has a benefit-cost ratio of only 1 to 1 without irrigation features and there is no prospect for developing these features at the present time. The Bureau is directed to apply these unobligated balances to the approved projects in the 1958 program. The budgeted amount of new funds has been reduced accordingly.

"*Missouri River Basin investigations.*—The committee recommends reduction of $1 million in the budget estimate of $3 million for this program. It is directed that no more than $500,000 be allotted to the Garrison diversion unit and that no more than $100,000 be allotted to the Oahe unit.

"*Other Department of the Interior agencies.*—The reduction of $625,000 made in these programs is geared to the other program reductions made in the Missouri River Basin. None of the reduction is to be applied against the item for archeological explorations in reservoir sites.

"*Unobligated balances.*—In addition to the reduction in new funds made because of the application of unobligated balances from the Boulder Canyon project, the Yellowtail unit, and the loan program, the committee has made a further reduction of $3 million to compensate for unobligated carryover balances. This brings the total of reductions in new funds to be compensated for by unobligated carryover to $20,121,777 as shown in the foregoing table."

JUSTIFICATION

The amendment restores $7,225,000 of the $22,611,777 reduction made by the House in the Budget estimate. This amount is for the following activity:

Statement of House action on appropriation of new funds and restoration request, fiscal year 1958

Activity	Appropriation, 1957	Budget estimate, 1958	House allowance, 1958	Restoration requested, 1958	Total appropriation request, 1958
Gila project, Arizona	$977,000	$869,000	$869,000		$869,000
Parker-Davis project, Arizona-California-Nevada	312,000	792,000	792,000		792,000
Boulder Canyon project, Arizona-Nevada	20,000				
Central Valley project, California	19,504,271	25,146,000	22,881,000		22,881,000
Santa Maria project, California	5,693,283	5,627,000	5,627,000		5,627,000
Solano project, California	10,801,508	3,672,000	3,672,000		3,672,000
Ventura project, California	2,250,000	12,000,000	12,000,000		12,000,000
Colibran project, Colorado	970,000	2,000,000	2,000,000		2,000,000
Colorado-Big Thompson project, Colorado	230,000	549,000	549,000		549,000
LittleWood River project, Idaho		400,000	400,000		400,000
Michaud Flats project, Idaho	2,080,000	1,297,000	1,297,000		1,297,000
Minidoka, north side pumping division, Idaho	2,768,000	1,465,000	1,465,000		1,465,000
Palisades project, Idaho	5,787,000	1,500,000	1,500,000		1,500,000
Fort Peck project, Montana-North Dakota	23,000	645,000	645,000		645,000
Middle Rio Grande project, New Mexico	3,850,000	3,758,000	3,758,000		3,758,000
Washita Basin project, Oklahoma	500,000	3,500,000	3,500,000		3,500,000
Crooked River project, Oregon		850,000	850,000		850,000
Rogue River Basin project, Talent division, Oregon	2,220,000	6,041,000	6,041,000		6,041,000
Wapinitia project, Oregon		400,000	400,000		400,000
Provo River project, Utah	639,000	574,000	574,000		574,000
Weber Basin project, Utah	10,056,000	6,500,000	6,500,000		6,500,000
Chief Joseph Dam project, Foster Creek division, Washington	1,320,000	1,138,000	1,138,000		1,138,000
Columbia Basin project, Washington	14,055,000	13,850,000	13,850,000		13,850,000
Yakima project, Roza division, Washington	1,715,000	697,000	697,000		697,000
Eden project, Wyoming	869,000	875,000	875,000		875,000
Shoshone project, Wyoming	389,000	544,000	544,000		544,000
Drainage and minor construction, various	6,992,062	893,000	893,000		893,000
Rehabilitation and settlement, various	3,489,876	3,530,000	3,530,000		3,530,000
Missouri River Basin project:					
Ainsworth unit, Nebraska		1,100,000		$1,100,000	1,100,000
Bostwick division, Nebraska-Kansas	4,690,000	1,471,000	1,471,000		1,471,000
Cedar Bluff unit, Kansas	47,000	50,000		50,000	50,000
Farwell unit, Nebraska		750,000		750,000	750,000
Frenchman-Cambridge division, Nebraska	3,151,000	3,260,000	3,260,000		3,260,000
Glendo unit, Wyoming	11,000,000	9,951,000	9,951,000		9,951,000
Helena Valley unit, Montana	1,750,000	4,500,000	4,500,000		4,500,000
Kirwin unit, Kansas	2,055,000	1,435,000	1,435,000		1,435,000
Owl Creek unit, Wyoming	1,142,000	1,100,000	1,100,000		1,100,000
Sargent unit, Nebraska	238,000	313,000	313,000		313,000
Shoshone extensions unit, Wyoming		500,000			
Transmission division, various	2,750,000	8,000,000	8,000,000		8,000,000
Webster unit, Kansas	368,000	1,000,000	1,000,000		1,000,000
Drainage and minor construction, various	984,000	791,000	791,000		791,000
Subtotal, Missouri River Basin	28,175,000	34,221,000	31,821,000	1,900,000	33,721,000
Investigations	2,879,500	3,000,000	2,000,000	1,000,000	3,000,000
Other Department of the Interior agencies	2,700,000	3,125,000	2,500,000	625,000	3,125,000
Total, Missouri River Basin	33,754,500	40,346,000	36,321,000	3,525,000	39,846,000
Loan program—Distribution systems	12,700,000	7,700,000		3,700,000	3,700,000
Estimated available unobligated balances		−11,500,000	−20,121,777		−20,121,777
Total construction and rehabilitation	143,975,500	135,658,000	113,046,223	7,225,000	120,271,223

A breakdown of the restoration requests by objects of expenditure follows:

01	Person services	$642,400
02	Travel	23,000
03	Transportation of things	18,000
04	Communication services	9,000
05	Rents and utility services	6,000
06	Printing and reproduction	6,000
07	Other contractual services	4,120,000
	Services performed by other agencies	21,000
08	Supplies and materials	62,000
09	Equipment	76,000
10	Lands and structures	2,203,000
11	Grants, subsidies, and contributions	800
	Contribution to retirement fund	40,000
13	Refunds, awards, and indemnities	1,600
15	Taxes and assessments	500
	Subtotal	7,229,300
	Deduct charges for quarters and subsistence	−4,300
	Total	7,225,000

Missouri River Basin project, Ainsworth unit, Nebraska, $1,100,000 (House hearings, pt. 1, pp. 889 to 898)

Restoration of the House reduction of $1,100,000 is requested.

The House committee report used $53.92 increase in gross crop values per acre (rather than increased net income) as the basis for disallowing this request on the assumption that the per-acre repayment of $8.82 was too low. The increase in gross crop values must also pay for increased production costs, and other items; consequently repayment capacity for water is only $8.82 per acre.

The program provides funds for acquisition of rights-of-way, preparation of plans and specifications and award of contract for the Merritt Dam and Reservoir and access road. Field design data for about 53 miles of the Ainsworth Canal will be completed and preparation of plans and specifications will be started. Field-design data will be collected for the lateral system to serve 33,960 acres. Field-office housing and other service facilities will be acquired. This work constitutes the first construction on the project. A repayment contract was executed September 12, 1956.

Missouri River Basin project, Cedar Bluff unit, Kansas, $50,000 (House hearings, pt. 1, pp. 903 to 909)

Restoration of the House reduction of $50,000 is requested.

The House committee report stated that this item was deleted because it was to begin construction of a new unit of an existing project. Material submitted by the Bureau in support of the fiscal year 1958 request shows that the funds are required only for the continuation of planning and for negotiations with the proposed irrigation district.

Cedar Bluff Dam has been completed except for outlet-works modification required for irrigation use. The dam represents an investment of more than $13 million and, to obtain the maximum return on this investment, the irrigation phase of this project should be made available as soon as possible.

Missouri River Basin project, Farwell unit, Nebraska, $750,000 (House hearings, pt. 1, pp. 909–914)

Restoration of the House reduction of $750,000 requested.

The House committee report disallowed the $750,000 requested on the basis that the benefit-cost ratio for the unit was 0.53 to 1, computed on the criteria established by the Bureau of the Budget. The ratio is 1.66 to 1, based on total benefits for a 100-year period which is Reclamation's standard procedure. The water users will repay 31 percent of construction costs in 40 years plus all operation and maintenance charges, which is above average in the Missouri River Basin project.

This restoration will provide for collection of detail design data, preparation of final designs and specifications, acquisition of right-of-way, award of contracts, and the start of construction on Sherman Dam and Reservoir and the Sherman feeder canal. This work constitutes initial construction of the unit

which, when completed, will provide a full supply for the irrigation of 52,530 acres. A repayment contract was executed on March 23, 1957.

Missouri River Basin Investigations, $1 million (House hearings, pt. 1, pp. 977–993)

Restoration of the House reduction of $1 million is requested.

At the present time, the Bureau does not have any significant backlog of planned developments in the Missouri River Basin which can be recommended for start of construction. This has been due to difficulties inherent in introducing irrigation to the Great Plains area and the slowness with which the planning work has proceeded because of limited funds. As a result, the construction program is rapidly approaching a critical stage in that most of the units that have been placed under construction to date are either complete or approaching completion. Unless additional units are added to the construction program at regular intervals in the future, the rate of development of this basin project will decline rapidly in the next few years. It must be recognized however, that the average development requires a minimum of 4 to 5 years of careful survey and study to insure a sound development and to prepare a report thereon. Because of this time lag, the planning program must be reviewed not in the light of conditions existing at the present time but of conditions expected to prevail 4 or 5 years in the future.

The reduction by the House committee would make the situation worse by necessitating the deferral of a significant part of the fiscal year 1958 program. In addition to unspecified reductions the House committee, in its report, directed that no more than $500,000 be allotted to the Garrison diversion unit and that no more than $100,000 be allotted to the Oahe unit. These reductions of $281,000 and $261,000, respectively, would adversely affect the rate of progress on the investigations of these two large units in North Dakota and South Dakota.

Furthermore, the funds available for this planning activity have varied widely from year to year with the result that it has been almost impossible to maintain a reasonably stable and efficient planning organization. With each curtailment of funds personnel retrenchments have been necessary which have resulted in loss of valuable technicians. With each subsequent increase, recruitment and training of replacements have been necessary. The reduction by the House committee represents a 33⅓-percent curtailment in funds below the level of the current fiscal year which would necessitate a significant reduction in the progress of the planning work and the size of the organizations.

In the interest of maintaining a stable and efficient program geared to the needs of the area the restoration of $1 million is essential to provide the full amount in the budget estimate of $3 million, which is a minimum program.

Other Department of the Interior agencies, $625,000 (House hearings, pt. 1, pp. 984–1009)

Restoration of the House committee reduction of $625,000 is requested.

The budget estimate of $3,125,000 for other Department of the Interior agencies is predicated on a well-balanced and coordinated program relating directly to the Missouri River Basin program. Work relating to minerals exploration, conservation measures for fish and wildlife and relocation and reestablishment of Indian peoples must be timed with the scheduled closure of dams and filling of reservoirs. Geologic and mineral resources mapping, water resource studies and cadastral surveys should be continued to form an adequate basis for planning resource development. The reduction from the budget estimate of $3,125,000 to $2,500,000, a decrease of $625,000, made by the House committee will curtail this work so that it will not be possible to keep these cooperative investigative programs in gear with the scheduled construction.

Loan program—distribution systems, $3,700,000 (House hearings, pt. 2, pp. 424–431)

Restoration of $3,700,000 of the House committee reduction of $7,700,000 is requested.

The amount requested to be restored will be used to provide the loan requirements for the fiscal year 1958 only for the Porterville and Saucelito Irrigation Districts in the amount of $1,300,000 and $2,400,000, respectively. Progress on the reports for these districts is proceeding rapidly, and it is anticipated that contracts will be executed with the districts in fiscal year 1958 for the entire estimated cost of the distribution systems.

93520—57——16

COST EXPERIENCE, 1957

Chairman HAYDEN. What has been your experience through the current fiscal year with respect to the cost of construction? I think you covered that fairly well, but I would like to have you repeat it, briefly, now.

Mr. DEXHEIMER. Specifically, for the current year we find that costs of construction are going up approximately 4 percent a year. Some types of construction are going up even more than that.

Recent agreements with various organized labor groups and the Associated General Contractors in the Western States have provided very large increases in labor costs and specified that those increases would continue, that is, there would be additional increases not only in the hourly rates, but particularly in so-called fringe benefits and pay for working in isolated areas when their families cannot be with them, which raises the labor costs, on our work in isolated areas particularly, a great deal.

In addition to that, of course, there have been a great many increases in materials and equipment, and there seems to be no chance of those leveling off or decreasing. The bids received indicate that labor costs are about 4½ percent higher than a year ago, and 8 percent greater than in January 1955.

PREPARED STATEMENT

I have a statement here, Mr. Chairman, that I would like to submit for the record, giving a little more detail of our experience.

Chairman HAYDEN. That may be done.

(The statement referred to follows:)

CONSTRUCTION COST TRENDS AND BUREAU OF RECLAMATION ESTIMATES

As is the case in the construction industry generally, Bureau of Reclamation construction costs have increased steadily during the past 2 years. Cost indexes for construction machinery, equipment, and materials, the basic requirements for reclamation heavy construction work, have risen in closely parallel steps since 1945. However, Bureau of Reclamation construction costs have not risen as much as the cost of the basic items—material, equipment, and labor. The development of new construction machinery and methods which perform more work and do it more efficiently and the utilization of new materials have been advantageous to the Bureau. Advances made in developing new techniques for handling mass concrete and the use of more efficient excavating and earth-moving machinery serve to illustrate this point.

The accompanying chart shows construction cost indexes related to Bureau of Reclamation work for the 12-year period, 1945 through 1956. Rising wage rates is one of the major factors in the continuing increase in cost indexes especially where the proportion of labor costs is high compared with equipment and material costs. On the basis of bids received on Bureau work, labor costs are about 4½ percent higher than a year ago and 8 percent greater than in January 1955. Wage rates will continue to rise over the next 2 years as a result of labor-management contracts recently negotiated in most of the western States which provide for annual increases of about 8 percent during the coming 2-year period.

The cost of materials which go into our structures is also increasing as a result of increased manufacturing costs, freight rates, and higher demands on available supplies. At the present time there is a great demand for construction materials such as steel and cement. Steel prices were increased during the summer of 1956, and these prices are expected to go higher in 1957 following additional wage increases provided for in existing agreements. Some cement companies have announced price increases at their mills effective as of the first of the year, 1957.

Higher prices for construction equipment have a direct effect on construction costs. The average price for excavating and earth-moving machinery has increased nearly 8 percent during the last year and further advances in equipment prices are in prospect for next year (4 to 10 percent) due to a further increase in steel prices. New demands for equipment will also create conditions for increased prices. Present high interest rates increase the contractors' cost of financing their operations and are also a direct factor in increasing the amounts bid on construction work.

Reclamation construction cost indexes specifically applicable to Bureau work are prepared and maintained for the purpose of up-dating project cost estimates. Detailed and reconnaissance-type cost estimates for proposed Bureau projects are generally prepared several years in advance of the final designs, specifications, and the corresponding engineer's estimate. Because of budgeting and other requirements, it is necessary to keep these preliminary cost estimates on a current basis. Since it would be impractical, if not impossible, to prepare new estimates in detail each year for all of the proposed work, project cost estimates are brought up to current price levels by use of the reclamation construction cost indexes.

The engineer's estimate as used by the Bureau of Reclamation is a detailed computation of the probable cost to a reputable contractor to perform the work. The engineer's esimate is, in effect, a competitive bid which takes into account all elements pertaining to the cost of the work such as materials, equipment ownership and operation, labor, supervision, and overhead and freight costs. It also includes an allowance for contingencies and a reasonable profit for the contractor as viewed by Bureau engineers. It is used primarily for evaluating bids submitted by contractors to determine whether the bids received are within a reasonable cost range. The value of the engineer's estimate lies in its reliability as a measure of what a given construction contract should properly cost under normal conditions and at current prices.

The Bureau's record of accurately estimating the actual cost of construction is reflected in a comparison of the estimate with bids received from construction contractors over a number of years. As a result of a recent study it was found that the sum of contracts awarded during the 12-year period from 1945 through 1956 is 96 percent of the sum of the engineer's estimates prepared by the Bureau before bid openings. For the years 1955 and 1956, these ratios are 98.0 and 108 percent, respectively. This indicates that regardless of fluctuations between the engineer's estimate and the amount of the contract awarded for some individual job, the total value of all contracts awarded has been accurately gaged by the engineer's estimates. The ratio of the sum of contracts awarded during each quarter of the years 1945 through 1956 to the sum of the engineer's estimates is given in the attached tabulation.

An important point to consider in analyzing these data is the fact that the engineer's estimate is not intended to be a guess as to the amount of the low bid. There are usually wide variations in bids for any specification schedule and variations between the low and high bid of from 50 to 100 percent are not uncommon. Since most of the higher bids for the same specification schedule are submitted by contractors who are just as accurate and reliable as the low bidder, it is evident that there are other elements besides reasonable cost of the work which influence the bid amount and receive the contractor's consideration in bidding on the job.

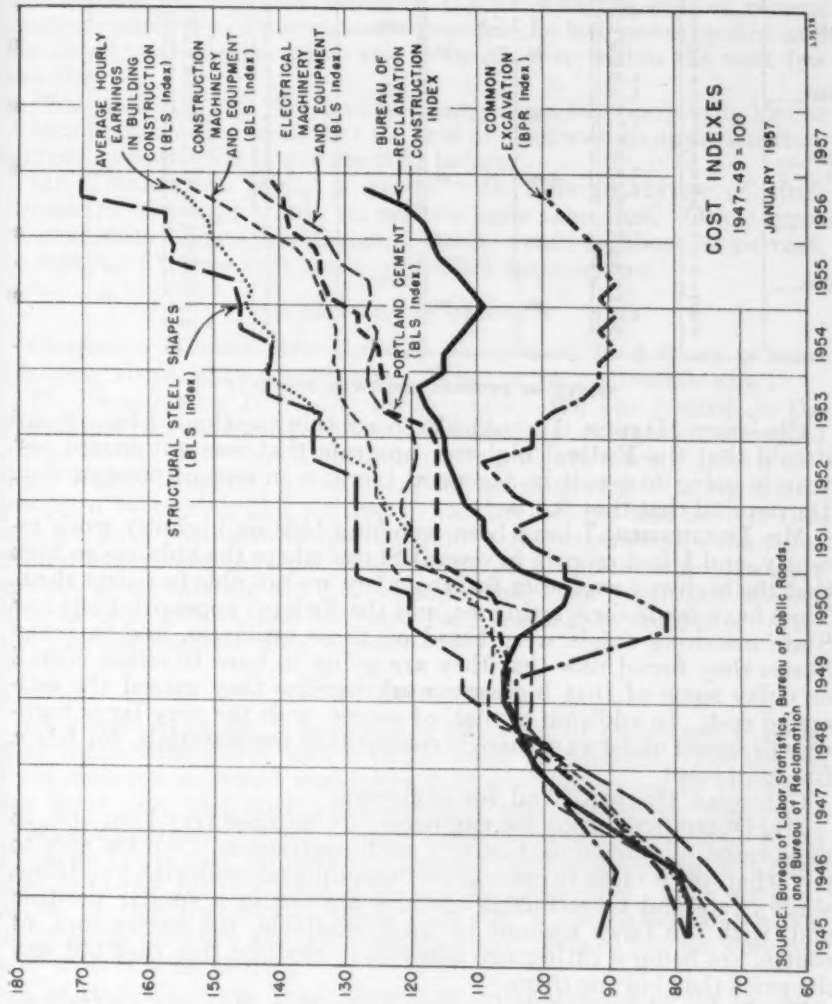
In bids received by the Bureau there is usually a group of two or more bids which are reasonably close in magnitude but somewhat higher than the low bid and considerably under the highest bids. This group or plateau of bids probably represents the common base and thinking of those contractors who figured their bids on the same basis with the desire to receive award of the contract. The engineer's estimate should be and usually is fairly close to this group. The lowest bids may be "sacrifice" bids submitted by contractors so anxious to get the job that they are willing to sacrifice part of their profit and make only enough to cover salaries and expenses in order to obtain the work. Perhaps a large amount of equipment of the exact type needed was sitting idle; perhaps they wanted to keep an organization together; or perhaps they expected a large amount of the same type of work in the future in the same area and wanted to get in on the ground floor.

The bids in the extreme high range are probably from contractors who either were not especially interested in doing the job, did not have the equipment

available, or would not accept the work without a larger profit. Sometimes when construction activity is at a high level and there is little competition for the work, this is the only kind of bid received, and if the work is to be accomplished during such a period, the prices quoted may have to be paid irrespective of the engineer's estimate. Also in some cases the uncertainties at the job site such as unusual or indeterminable geology or foundation conditions, erratic stream flow or weather conditions or unusually short time to accomplish the work may not be adequately covered by the estimate or similarly gaged by the bidder.

Large jobs requiring 4 or 5 years to complete are particularly difficult to estimate accurately because of the uncertainty of future costs. Except in those infrequent cases where the contract provides for partial price adjustments for changes in costs of some items of material or labor, Reclamation contracts are awarded on the basis of firm bids submitted by the contractor. In bidding, each contractor must figure his cost in competition with other contractors and at the same time guarantee by means of a performance bond that the job will be completed as required by the specification in the time allotted and for the amount bid. Under these conditions the contractor must be assured that the amount bid on the contract will be adequate to cover any type of emergency.

By using the engineer's estimate as a guide in judging the reasonable cost of performing the work, the Bureau can decide whether construction of a particular project should proceed on the basis of bids received on the job. The reliability of these estimates in gaging construction costs is demonstrated by the fact that the total dollar value of all contracts awarded since 1945 is 96 percent of the engineer's estimates.


COST INDEXES
1947-49 = 100
JANUARY 1957
AVERAGE HOURLY EARNINGS IN BUILDING CONSTRUCTION (BLS Index)
CONSTRUCTION MACHINERY AND EQUIPMENT (BLS Index)
ELECTRICAL MACHINERY AND EQUIPMENT (BLS Index)
BUREAU OF RECLAMATION CONSTRUCTION INDEX
COMMON EXCAVATION (BPR Index)
STRUCTURAL STEEL SHAPES (BLS Index)
PORTLAND CEMENT (BLS Index)
SOURCE: Bureau of Labor Statistics, Bureau of Public Roads, and Bureau of Reclamation
180
170
160
150
140
130
120
110
100
90
80
70
60
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957

BUREAU OF RECLAMATION

Ratio of low bid award amounts to engineer's estimate, 1945 to 1956, inclusive

Year	Quarter	Quarterly average	Yearly average	Average to date	Year	Quarter	Quarterly average	Yearly average	Average to date
1945	1	1.00			1951	1	0.95		
	2	.88	1.00	1.00		2	1.00	0.97	0.96
	3	.86				3	.98		
	4	1.02				4	.90		
1946	1	.96			1952	1	.98		
	2	.89	.91	.93		2	1.04	1.00	.96
	3	.89				3	.96		
	4	1.25				4	.94		
1947	1	1.08			1953	1	.84		
	2	.87	.97	.94		2	.91	.89	.96
	3	1.07				3	.95		
	4	.87				4	.87		
1948	1	.99			1954	1	.88		
	2	1.07	1.03	.98		2	.72	.84	.95
	3	1.10				3	.93		
	4	.95				4	.92		
1949	1	.91			1955	1	.93		
	2	.95	.93	.97		2	1.00	.98	.95
	3	.93				3	.93		
	4	.91				4	1.02		
1950	1	.76			1956	1	.92		
	2	.89	.90	.96		2	.95	1.08	.96
	3	1.01				3	.95		
	4	.99				4	1.30		

EFFECT OF FEDERAL HIGHWAY PROJECTS

Chairman HAYDEN. I would like to ask this question. I have heard it said that the Federal highway program that was authorized last year is going to result in a general increase in cost of construction. Do you find that that is true?

Mr. DEXHEIMER. I have been watching bids on highway work recently, and I find reports in several States where the bids are so high that the highway engineers feel that they are not able to accept them. They have made their estimates, and the Federal appropriations and State matching funds were based on those estimates, and in many States they found now that they are going to have to either curtail or delay some of that highway work because they exceed the estimated cost. In addition to that, of course, with the very large highway program underway, there is competition for materials, for labor, for equipment.

Chairman HAYDEN. And for engineers.

Mr. DEXHEIMER. And for engineers. It becomes very keen and, in some cases, of course, particularly with contractors, they are able to pay whatever it takes to get engineers, equipment, material, and labor, while State and Government agencies are not in a similar position and, with the large amount of work available, the contractors, of course, are being a little more selective in the jobs that they bid and the price they bid for them.

We find, and I think it is going to be true, that the contractors would prefer a short-term highway job where they have a minimum of labor and equipment and can complete the job in 1 or 2 seasons, to bidding on our work, which in many cases takes 4 to 7 years to complete 1 contract with the unknown rises in costs that they might be faced with over that period of years.

AVAILABILITY OF CONSTRUCTION MATERIALS

Chairman HAYDEN. Tell me about your difficulty with respect to materials.

Mr. DEXHEIMER. The steel industry, particularly, has not only increased the prices of certain types of steel that are used in highway and in construction work about 15 percent, but their rolling mills are way behind on orders and it is difficult to get the materials in time. The cement industry has increased the price at the mill of cement approximately 6 to 8 percent each year for the last several years, and has announced another price rise to be effective within the next few months.

Chairman HAYDEN. We had testimony from the Bonneville Power Administration last week that the cost of steel was up approximately 16 percent over what it was the year before.

Mr. DEXHEIMER. Well, it varies with different types of steel. Structural shapes, I think, are a little more than that. Other types of steel, rolled plate and things, I think, would be about 15 percent, so that those things very materially affect construction.

RECRUITMENT OF ENGINEERS

Chairman HAYDEN. My highway department in Arizona is complaining about getting engineers. What is your situation now?

Mr. DEXHEIMER. It is difficult anyplace. We are limited on the amount of pay we can offer them, of course, and private industry and others do not have that limitation, so that we are having quite a difficult time. However, we have carried on somewhat of a recruiting program by talking and writing to various colleges and universities, and we have been able to interest quite a few engineers in the value of the experience they get in our type of program, which is quite varied, as against a more limited experience they might get in some industries or others, and we have been reasonably successful in recruiting the engineers that we need.

BUDGETARY RESERVES

Chairman HAYDEN. I have before me a list of budgetary reserves that totals $18,678,996 and involves some 20 projects. Do any of these reserves represent the deferral of work approved by Congress for fiscal year 1957 that could not have been performed that year?

Mr. DEXHEIMER. No, sir. Those funds placed in reserve were listed by us as funds that we were for one reason or another not in a position to utilize for that project during the fiscal year. That work, of course, is just postponed. It is work that is authorized and which we plan to do when the circumstances will permit, but we were not able to do it in fiscal 1957.

Chairman HAYDEN. Were these reserves established by the Department or by the Bureau of the Budget?

Mr. DEXHEIMER. They were established by the Bureau of the Budget.

Chairman HAYDEN. Your Department takes it up with the Bureau of the Budget?

Mr. GOLZE. Mr. Chairman, the procedure here is that the Bureau of the Budget is the agency that approves them. They are submitted

by the Bureau of Reclamation to the Department, and the Department, on its approval, sends them to the Bureau of the Budget, and there they are approved finally, and they are placed in reserve by the Bureau of the Budget.

EFFECT OF HOUSE REDUCTION

Chairman HAYDEN. At page 16 of the House report it shows total construction and rehabilitation, $133,168,000. This says reduction offset by available unobligated balances, $20,121,777, so that the total appropriation is only $113,046,225. Now, did the House have in mind that this reduction that they are making is money that would not be spent, or are they taking into consideration that it is reserve money that you have accumulated? What is the effect going to be?

Mr. DEXHEIMER. The effect, Mr. Chairman, would be to reduce our rate of progress; that is, work that would need to be done. It just slows up the time when you can do it by not having funds available for the work. That represents work not accomplished in fiscal 1957.

Chairman HAYDEN. You contracted to have the work done in 1957.

Mr. DEXHEIMER. Well, in some cases we have had to defer awarding those contracts and we would have to further defer.

Chairman HAYDEN. It is work that is set up, planned, and proposed to be done, and you are deferring it?

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. Does the deferral justify a reduction in the total appropriation for next year?

EFFECT OF DELAY ON COSTS

Mr. DEXHEIMER. No, sir. I do not think it does. The longer you defer it, the more it is going to cost, and I think it is uneconomical to defer work that you could accomplish once it is authorized and ready to start or actually under construction.

Chairman HAYDEN. It seems to me that there is force in that argument, because the longer we put these things over the higher the prices will be. Wages go up that much more and you do not get the work done for the same amount of money.

Mr. DEXHEIMER. I think that is correct, Mr. Chairman. Once you have an authorized project, the sooner you can get it completed and the more efficiently you can do the work, assuming an economical rate of construction, of course, the better off the project will be and the better off the appropriation will be.

ACTUAL AMOUNT OF UNOBLIGATED FUNDS

Chairman HAYDEN. Do you actually have $20,121,777, in unobligated funds at the end of this year?

Mr. DEXHEIMER. No, sir. According to the present estimates, we will not have quite that much. I believe there is an item of $3 million that the House said was part of this unobligated balance. They just made a further reduction without any place to get it. In other words, it just means that we just have $3 million, at least, less money and we have to defer awarding contracts both in fiscal 1957 and 1958 in order to finance this program under that arrangement.

HOUSE APPROVAL OF VARIOUS PROJECTS

Chairman HAYDEN. There are a great number of projects in the construction program for which the House has approved the budget estimate. With respect to these projects where the funds requested are to continue a previously approved rate of construction, I do not feel that it is necessary to discuss them in detail.

However, if any member of the committee has any question on any project, they may ask them as we get to the project.

GILA PROJECT

The House committee recommended the allowance of the budget estimate of $869,000 for the Gila project; and the budget estimate of $815,926 for the Parker Davis project.

I assume these funds will maintain the construction schedule on these projects; is that right?

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. The detailed justifications will be included in the record.

(The justifications referred to follow:)

GILA PROJECT, ARIZONA

Location.—Southwestern Arizona, in the southern part of Yuma County. Project works extend from Imperial Dam on the Colorado River to approximately 10 miles south of Yuma, Ariz., and east along the lower reach of the Gila River to approximately 50 miles east of Yuma.

Authorization.—The project was initiated with funds allotted under the National Industrial Recovery Act (48 Stat. 195) and the Emergency Relief Appropriation Act of 1935 (48 Stat. 115). A finding of feasibility dated June 8, 1937, by the Secretary of the Interior was approved by the President on June 21, 1937. The project was reauthorized by the act of July 30, 1947 (61 Stat. 628). The act of June 13, 1949 (63 Stat. 172), authorized the furnishing of water to the Yuma auxiliary project, through the works of the Gila project. The act of January 28, 1956 (70 Stat. 5) authorized additional drainage work, additional pump capacity and operation and maintenance buildings and equipment, all in connection with the Yuma Mesa division.

Description.—The project includes 19,970 acres on the Yuma Mesa, 8,099 acres in the North and South Gila Valleys, near Yuma, and 75,000 acres in the Wellton-Mohawk division, beginning some 12 miles east and terminating approximately 50 miles east of Yuma. The primary purpose of the project is to provide a full water supply to 103,069 acres of arid lands within the project and to 3,305 acres in the Yuma auxiliary project. Four main canal pumping plants are required to deliver water to the distribution systems.

Benefit/cost ratio.—Construction started prior to establishment of this requirement.

Summarized financial data

Estimated total obligations	$55,818,664
Total obligations to June 30, 1956	52,336,017
Total obligations, fiscal year 1957	1,319,226
Total obligations, fiscal year 1958	869,000
Balance to complete	1,294,421

On a cost basis the fiscal year 1958 program will total $1,022,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$51,473,370	$56,037,421
1958 congressional justification	51,697,520	55,818,664
Change	+224,150	−218,757

The estimated total cost of the Gila project has been increased from $51,473,370 to $51,697,520. The change is principally due to inclusion of costs in the estimate for Yuma Mesa water users' headquarters buildings, and service equipment and increased capacity of Yuma Mesa pumping station. Adjustments have been made to reflect modification of canal banks, raising lateral lining and purchase of canal meters. These increases are offset in part by lower bid as a result of readvertisement of work under the Mohawk lateral system, reduction of anticipated overruns and decreased overhead costs.

Allocation of estimated total project costs

Reimbursable:	
Irrigation	[1] $51,072,730
Other (project housing)	251,945
Subtotal, reimbursable	51,324,675
Nonreimbursable:	
Other (headquarters buildings and facilities)	[2] 372,845
Subtotal, nonreimbursable	372,845
Total	51,697,520

[1] Nonreimbursable irrigation costs authorized by sec. 3 of the act of Jan. 28, 1956 (70 Stat. 5), have not been determined.
[2] Construction by Corps of Engineers, Department of Army, with funds provided by U. S. Air Force and transferred to Bureau of Reclamation at Vincent Air Force Base, Yuma, Ariz.

Repayment of reimbursable costs

By irrigation water users	[1] $51,072,730
By rental revenues	251,945
Total	51,324,675
Repayment cost per acre:	
Federal investment per acre: To be repaid from water users	[1] 495
Annual water users charges:	
Construction	8.25
Operation and maintenance	12.60
Total	20.85

[1] Nonreimbursable irrigation costs authorized by sec. 3 of the act of Jan. 28, 1956 (70 Stat. 5), have not been determined.

Repayment contracts.—A contract, dated March 4, 1952, was executed with the Wellton-Mohawk Irrigation and Drainage District for a maximum obligation of $42 million. A contract, dated December 22, 1952, was executed with the unit B Irrigation and Drainage District (Yuma auxiliary project) under which $456,090 of Gila project obligations will be repaid. A contract, dated May 12, 1953, amended and supplemented by one dated June 24, 1954, was executed with the North Gila Valley Irrigation District under which $108,300 will be repaid for usable works constructed by the Yuma project and a maximum of $366,700 of Gila project obligation will be repaid. A contract, dated May 26, 1956, was executed with the Yuma Mesa Irrigation and Drainage District under which $5,641,167 of Gila project obligation will be repaid. Preliminary steps have been taken which may lead to contract negotiations with the Yuma Irrigation District

for capacity constructed in the project common features to serve the South Gila Valley.

Physical data

Feature	Type	Capacity	Height	Length (miles)
Project common features:				
Diversion works:				
Arizona headworks of Imperial Dam and desilting basin.		2,200 c. f. s.		
Gravity main canal	Earth lined	2,200–2,100 c. f. s.		15.0
Yuma Mesa division:				
Pumping plant (1 plant)		975 c. f. s.		
Gravity main canal	Earth lined	800 c. f. s.		5.9
Canals A and B	Concrete lined	420 to 28 c. f. s.		22.9
Lateral systems	Various	28,069 acres		
Wellington-Mohawk division:				
Pumping plants (3 plants)		900 to 1,300 c. f. s.		
Wellton-Mohawk canal	Concrete lined	1,300 to 900 c. f. s.		18.0
Mohawk Canal	do	900 to 15 c. f. s.		44.0
Wellton Canal	do	300 to 15 c. f. s.		15.0

Acres to be served

	Acres
Yuma Mesa division:	
Full supply	28,069
Supplemental supply	0
Welton-Mohawk division:	
Full supply	75,000
Supplemental supply	0
Total	103,069

Status.—On June 30, 1957, the project will be approximately 96 percent complete, with work on all major items except drains being functionally completed.

WORK PROPOSED, FISCAL YEAR 1958

Project common features

Drainage investigations, $6,922.—Continue drainage investigations for north and south Gila Valleys.

Yuma Mesa division

Yuma Mesa pumping station, $116,000.—Purchase of additional pump, motor, and accessory electrical equipment, which, when installed, will provide a total pumping capacity of 975 cubic feet per second.

Yuma Mesa unit drainage facilities, $200,000.—The program provides for continued drainage investigation studies and construction work scheduled to control rising ground-water conditions.

Water users facilities, $100,000.—For the purchase of major items of equipment that will be required by the Yuma Mesa Irrigation and Drainage District in order to assume care and operation of Bureau-constructed works within the district. The items to be purchased are not available for transfer to the district from Bureau-owned equipment. This item is covered by the district's repayment contract, dated May 26, 1956, as authorized by the act of January 28, 1956 (Public Law 394, 84th Cong., 2d sess.), and is in accordance with Public Law 924, 84th Congress, 2d session (70 Stat. 940), approved August 2, 1956.

Wellton-Mohawk division

Mohawk Canal, $1,000.—To complete necessary services in connection with land acquisition.

Wellton Canal, $500.—To conclude land acquisition procedure.

Mohawk unit laterals, $45,300.—This amount programed for final settlement of land acquisition contracts, and costs associated with project closeout.

Wellton unit laterals, $13,620.—Settlement of remaining land rights contracts and share of project closeout costs.

Dome unit laterals, $27,071.—This programed amount for final disposition of land-rights contracts and share of project closeout costs.

Texas Hill unit laterals, $14,050.—This amount represents share of project closeout costs and anticipated funds required to conclude land-rights contracts.

Wellton-Mohawk Canal unit laterals, $4,000.—This amount is unit share of project closeout costs.

Drainage investigations—Wellton-Mohawk area, $20,000.—The program of ground water observations and maintenance of a continuing record of ground water elevations will be continued as a means of advance determination of potential problem areas that may require installation of drainage works.

Wellton-Mohawk main drain, $378,150.—Surveys and studies, to determine requirements and location of drains, will be continued until scheduled start of construction in third quarter.

Lateral drains, $50,000.—Surveys and studies will continue, to determine requirements and location of drains, prior to initiation of construction scheduled in fiscal year 1959.

Contributions to civil service retirement fund, $31,800.—Initial year contribution to civil service retirement fund.

Transitional development, $35,169.—Represents costs incurred in land settlement activities less revenues received from Development Farm and the cost of operating and maintaining capacity of project common features and Wellton-Mohawk division common features allocable to lands not included in established irrigation blocks.

Adjustments, —$21,582.—Represents net result of distribution of Wellton-Mohawk division closeout costs to division features and the salvage value of service facilities and stores transferred from project.

Other expenditures and credits, —$60,000.—Cost of service facilities and stores accrued in prior years which will be distributed to permanent property or transferred from project in the budget year.

Undelivered orders, —$93,000.—Liquidation of prior-year contract obligations.

PARKER-DAVIS PROJECT

Parker-Davis Project, Arizona-California-Nevada

Location.—The principal features of the Parker-Davis project are located in Arizona, southern Nevada, and southeastern California. Parker and Davis Dams are located on the Colorado River 155 and 67 miles, respectively, below Hoover Dam. The transmission lines, which interconnect Parker, Davis, and Hoover powerplants and extend to the load centers, traverse Mohave, Yuma, Maricopa, Pinal, Pima, Yavapai, and Cochise Counties in Arizona; Clark County in Nevada; and San Bernardino, Riverside, and Imperial Counties in California.

Authorization.—The Parker-Davis project was formed by the consolidation of the Parker Dam power project and Davis Dam project by the act of May 28, 1954 (68 Stat. 143). The Parker Dam power project was authorized by the River and Harbor Acts of August 30, 1935 (49 Stat. 1028). The Davis Dam project was authorized on April 26, 1941, by the Secretary of the Interior, under provisions of the Reclamation Project Act of 1939 (53 Stat. 1187).

Description.—Project facilities consist of 1 concrete dam, 1 earth-filled dam, 2 reservoirs, 2 hydroelectric powerplants, 1,599.8 miles of transmission lines, and 1,987,833 kilovolt-amperes of installed transformer capacity at 37 substations. The installation in fiscal year 1958 of 1 transformer with 35,833 kilovolt-amperes of capacity will bring the project total in 2,023,666 kilovolt-amperes. The total nameplate rating of the 4 units installed at Parker powerplant is 120,000 kilowatts and of the 5 units installed at Davis powerplant is 225,00 kilowatts. The transmission system interconnects the Parker Davis, Hoover, and Siphon Drop powerplants of the Bureau. It also serves domestic, irrigation, and industrial loads in the area and is connected to private and public utility generation and transmission systems in the three States, forming part of an integrated power system in the Pacific Southwest.

Benefit/cost ratio.—Construction started prior to establishment of this requirement.

Summarized financial data

Estimated total obligations	$142,934,694
Total obligations to June 30, 1956	141,562,329
Total obligations, fiscal year 1957	556,439
Total obligations, fiscal year 1958	815,926
Balance to complete	-------

On a cost basis the fiscal year 1958 program will total $815,926. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total construction costs and obligations

	Costs	Obligations
As of January 1956	$143,094,591	$143,121,631
As of January 1957	142,844,961	142,934,694
Decrease	249,630	186,937

The decrease in total estimated costs results principally from deletion of the proposed additions at Cochise substation, revisions in estimates, and revised costs of completed features as a result of the plant-cost audit.

Allocation of estimated total project cost

Reimbursable:		
With interest: All electric plant investment not itemized below		$106,403,877
Without interest:		
Servicing the Treaty with Mexico	$10,524,000	
Irrigation allocation	11,785,879	
		22,309,879
Subtotal, reimbursable		128,713,756
Nonreimbursable:		
Metropolitan Water District contribution for construction of Parker Dam		12,986,952
Highway Construction—State of Arizona		31,060
Highway Construction—PRA, Act of July 29, 1946 (60 Stat. 709)		872,395
Subtotal, nonreimbursable		13,890,407
Subtotal		142,604,163
Adjustments to completed features		240,798
Total		142,844,961

Repayment of reimbursable costs

All reimbursable costs will be repaid from power revenues.

Physical data

Feature	Type	Capacity	Height	Length
Davis Dam	Earth and rock fill	1,820,000 acre-feet	200 feet	1,600 feet.
Davis powerplant		225,000 kilowatts		
Parker Dam	Concrete arch	716,600 acre-feet	320 feet	856 feet.
Parker powerplant		120,000 kilowatts		
Substations (37)		2,023,666 kilovolt-amperes		
Transmission lines				1,599.8 miles.

Status.—All dams, powerplants, transmission lines, substations, and facilities originally scheduled for construction are complete and in operation, with the exception of the microwave system. The contract for a microwave-system survey was awarded in fiscal year 1955, and the contract for installation of equipment will be awarded in fiscal year 1957.

During fiscal year 1953, a contract with the Arizona Power Authority was executed whereby the Bureau wheels the output of the Saguaro steam-electric-generating station built by the Arizona Public Service Co. to electric loads throughout Arizona. Under this contract the Bureau has built about 47 miles

of 115-kilovolt transmission lines, 2 new substations, and 3 tap stations; has enlarged or altered 5 substations; has added metering and minor equipment in 3 substatitons and switchyards, and plans to build 1 tap and enlarge 2 existing substations. Of the additions under this contract, only minor work remains at Gila substation; contracts for construction of Marana tap and additions to Prescott and Coolidge substations will be awarded in fiscal year 1958.

WORK PROPOSED, FISCAL YEAR 1958

Substation additions (APA wheeling contract) ($789,000).—Contracts will be awarded for construction of Marana tap in the Saguaro-Tucson 115-kilovolt line, for installation of 230/115-kilovolt transformer and associated switchgear at Prescott substation, and for a 115-kilovolt oil circuit breaker and associated switches at Coolidge substation. This completes all work now scheduled on these facilities.

Microwave system ($21,000).—The amount programed provides for completion of construction to be initiated in fiscal year 1957.

Contribution to civil-service retirement fund ($5,900).—This amount represents the estimated contribution by the Parker-Davis project in accordance with Public Law 854.

Adjustments ($26).—Minor cost adjustment.

BOULDER CANYON PROJECT

Chairman HAYDEN. The budget did not include any new funds for the Boulder Canyon project. However, there was an applied carryover of $187,000 programed in the budget. The justifications will be included in the record.

(The justifications referred to follow:)

BOULDER CANYON PROJECT, ARIZONA-NEVADA

Location.—In the Black Canyon of the Colorado River on the Arizona-Nevada States boundary, 30 miles east of Las Vegas, Nev., and 7 miles northeast of Boulder City, Nev.

Authorization.—Boulder Canyon Project Act of December 21, 1928 (45 Stat. 1057), as revised by the Boulder Canyon Project Adjustment Act of July 19, 1940 (54 Stat. 774).

Description.—The project consists of the highest dam in the United States with appurtenant outlet works, spillways, a powerplant, and transmission and switching facilities for delivery of power to high voltage transmission lines of the power allottees. The primary purpose of the project is to regulate the flow of the Colorado River for control of floods, for irrigation and municipal water supplies, for improvement of navigation, and for generation of electrical energy. The Hoover powerplant is designed to have an installed capacity of 1,354,300 kilowatts.

The project also includes Boulder City, which is an outgrowth of the Boulder Canyon project but is now budgeted as a separate activity.

Benefit-cost ratios.—Construction started prior to establishment of this requirement.

Summarized financial data

Estimated total obligations	$166,597,000
Total obligations to June 30, 1956	160,625,524
Total obligations, fiscal year 1957	252,000
Total obligations, fiscal year 1958	187,000
Balance to complete	5,532,476

On a cost basis the fiscal year 1958 program totals $187,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$173,100,000	$165,584,000
1958 congressional justification	174,000,000	166,597,000
Increase	900,000	1,013,000

The total estimated cost of the Boulder Canyon project has been increased from $173,100,000 to $174,000,000. This change was a result of an increase of approximately $900,000 interest during construction. Interest during construction was recomputed during a recent comprehensive audit.

Allocation of estimated total project cost

Reimbursable:	
Power	$149,000,000
Flood control	25,000,000
Total, reimbursable	174,000,000

Repayment of reimbursable cost

By power revenues	$174,000,000
Total	174,000,000

Repayment contracts.—Charges for electrical energy generated at Hoover Dam under existing contracts together with net revenues shall be sufficient to meet the cost of operation and maintenance, to provide for replacements during the period beginning June 1, 1937, and ending May 31, 1987; to repay the Treasury, with 3 percent interest, advances to the Colorado River dam fund made prior to June 1, 1937, within 50 years from that date (excluding $25 million allocated to flood control), and the portions of advances made on and after June 1, 1937, which are the basis of repayment within a 50-year period will be repayable prior to June 1, 1987; to pay $300,000 annually to each of the States of Arizona and Nevada; and to pay $500,000 annually to the Colorado River development fund.

Physical data

Feature	Type	Capacity	Height	Length
Hoover Dam and Reservoir	Concrete arch—gravity.	31,047,000 acre-feet	726 feet	1,244 feet.
Hoover powerplant	Hydro	1,354,300 kilowatts		

Status.—The prime construction contract was awarded on March 11, 1931. On June 30, 1957, the project will be approximately 97 percent complete with an installed nameplate rating of 1,249,800 kilowatts. Contracts for the N–8 turbine and generator, the last unit to be installed, are scheduled for award in fiscal year 1957.

WORK PROPOSED, FISCAL YEAR 1958

Hoover powerplant, $158,100.—This amount provides for preparation of specifications, and award of contracts for furnishing and installing equipment for unit N–8, and minor additions and improvements in the powerplant.

General property (dam and reservoir), $20,000.—This amount will be required for payment for materials and labor for minor additions and the purchase of minor items of project equipment.

Contribution to civil service retirement fund, $8,900.—Initial year contribution to civil service retirement fund.

Interest during construction, $3,000.—Interest during construction applicable to work underway in fiscal year 1958 in accordance with authorizing act.

Adjustments —$3,000.—Represents interest during construction included in project cost but for which funds are not required from this appropriation.

Chairman HAYDEN. As I understand the action of the House committee, they have disallowed this applied carryover, and also have directed the Bureau to use previously approved funds amounting to $813,923 on other projects. Have I correctly stated the action of the House committee?

Mr. DEXHEIMER. Yes, sir. We planned on that project to spend about $32,000 on miscellaneous items from the carryover for fiscal 1958.

Chairman HAYDEN. I want to get this perfectly clear in the record for the Nevada Senators who want to understand just what you are going to do at Boulder Dam.

Mr. DEXHEIMER. May we submit a statement in the record for that?

Chairman HAYDEN. Will you please?

(The material to be furnished follows:)

BOULDER CANYON PROJECT—ARIZONA-NEVADA, FISCAL YEAR 1958 PROGRAM

A fiscal year construction and rehabilitation program is proposed for Boulder Canyon project in the amount of $32,500 for work other than on unit N–8. The program will provide for minor completion work on units A–3, A–4, and A–9 including efficiency tests which have been delayed because of low water and for the purchase under the general property item, of a road grader with road-working attachments.

QUESTION OF HOLDING FUNDS

Chairman HAYDEN. I notice that these funds were provided for the planning of the last generator at the project. Inasmuch as the necessary agreements have not been reached with the allottees, is there any reason to hold these funds in the project?

Mr. DEXHEIMER. No, sir; not at this time, until that agreement, although it does look as though they may reach agreement soon. We have been holding them for several years.

Chairman HAYDEN. If an agreement is reached, then it would be necessary to come in and ask for an entirely new appropriation based upon that agreement, is that right?

Mr. DEXHEIMER. That is right.

CENTRAL VALLEY PROJECT

Chairman HAYDEN. The budget estimate for the Central Valley project is $25,146,000, of which $17,107,600 is for the Trinity Division. The House committee recommended an appropriation of $22,881,000. The justification will be included in the record.

(Justification referred to follows:)

Location.—The Central Valley consists primarily of the Sacramento and San Joaquin River valleys in California. The valley is approximately 500 miles long and 100 miles wide, extending from Mount Shasta in the north to the Tehachapi Mountains on the south. The watershed covers the area from the Sierra Nevada Range to the delta outlet through San Francisco Bay. The project comprises approximately 27 percent of the land area of the State, 19 of the 58 counties, and approximately 20 percent of the population.

Authorization.—Initiated under authority of the Emergency Relief Appropriation Act, 1935 (49 Stat. 115), and subsequently authorized by a finding of feasibility by the Secretary of the Interior, approved by the President on December 2, 1935. Additional authorizations made by the Rivers and Harbors Acts of August 26, 1937 (50 Stat. 844, 850), and October 17, 1940 (54 Stat. 1198, 1199). American River features authorized under the act of October 14, 1949 (63 Stat. 852). Sacramento Valley canals authorized under the act of September 26, 1950

(64 Stat. 1036). Trinity River division authorized by the act of August 12, 1955 (69 Stat. 719). Additional works for waterfowl management authorized by the act of August 27, 1954 (68 Stat. 879).

Description.—Project primarily consists of an integrated system of water conveyance from the northern portion of the valley to the southern portion together with a network of power production and transmission facilities. Shasta and Keswick Dams and powerplants control the Sacramento River in the north, Friant Dam controls the San Joaquin River in the south. Folsom Dam and powerplant control the American River—a tributary of the Sacramento River. Trinity division dam and powerplants will be on the Trinity River northwest of Shasta with water conveyance to the Keswick Reservoir. Tracy Pumping Plant lifts water from sea level to Delta-Mendota Canal. The project, when completed will include approximately 400 miles of canals, 750 miles of transmission lines, reservoirs with a capacity of 8 million acre-feet and powerplants with a capacity of 999,350 kilowatts.

Benefit to cost ratio.—Trinity division 3.3 to 1. Current cost ratio for remaining features not available.

Summarized financial data

Estimated total obligations	$749,336,883
Total obligations to June 30, 1956	457,236,835
Total obligations, fiscal year 1957	19,935,211
Total obligations, fiscal year 1958	25,146,000
Balance to complete	247,018,837

On a cost basis the fiscal year 1958 program will total $24,644,504. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$757,247,023	$757,503,781
1958 congressional justification	761,627,085	749,336,883
Change	+4,380,062	−8,166,898

The increase in total estimated cost is due to the addition of Terra Bella and Porterville distribution systems, and an increased estimate of the Saucelito distribution systems. (These distribution systems may be constructed by the water users through a loan from the United States under Public Law 130, 84th Cong., as amended.) These increases are offset in part by a reduction in estimate for Folsom land settlement with a private utility, the elimination of additional pumps on the Contra Costa Canal, a decrease in the cost of delta fish protection facilities, and a decrease in the estimate of the balance required for the Delta-Mendota Canal, and the elimination of the Corning Canal extensions.

Total estimated project cost and allocation

Total project cost	$761,627,085
Less:	
Rewind Shasta generator unit 4	−166,776
Distribution systems to be repaid by separate contracts	−65,998,917
Friant Fish Hatchery pipeline	−66,692
Add: Folsom Dam (constructed by Corps of Engineers)	+61,870,300
Total amount to be allocated	757,265,000

Allocation of costs

Reimbursable:	
Irrigation	$384,605,000
Power	292,037,000
Municipal and industrial water	17,419,000
Fish and wildlife	2,737,000
Subtotal, reimbursable	696,798,000
Nonreimbursable:	
Flood control	35,684,000
Recreation	215,000
Navigation	12,940,000
Fish and wildlife	11,628,000
Subtotal, nonreimbursable	60,467,000
Total amount allocated	757,265,000

Repayment of reimbursable costs

By irrigation water users	$279,161,000
By power revenues	397,565,000
By municipal water users	17,576,000
By reimbursable fish and wildlife	2,496,000
Total	696,798,000

Repayment costs per acre

Federal investment per acre:	
To be repaid by irrigation water users	$235
To be repaid by power revenues	89
Total	324

Annual water users charges:
Water service charges (includes O. and M. and construction)
Friant-Kern and Madera Canals:
Class 1 (firm supply), $3.50 per acre-foot
Class 2, $1.50 per acre-foot
Delta-Mendota and Contra Costa Canals, irrigation water, $3.50 per acre-foot
Sly Park unit, irrigation water, $2.50 per acre-foot
Sacramento canals and Folsom service area, $2.75 per acre-foot
River diversion, $2.25 and $1.50 per acre-foot

Repayment contracts.—At the start of fiscal year 1957, 34 long-term water service contracts for Central Valley project water had been executed, and contract negotiations were in various stages of progress with an additional 38 other districts. Contracts for the construction of distribution systems with a total estimated cost of approximately $55 million have been executed with 12 districts. Amendatory contracts increasing the maximum construction cost have been executed with six districts. Negotiations are nearly complete with 1 district for the construction of extensions to its distribution system to cost approximately a million dollars, and negotiations are beginning with another to increase the maximum construction cost by approximately $800,000. Negotiations are in progress with 4 districts for approximately $22 million in loans for distribution systems construction pursuant to Public Law 130 as amended. During fiscal year 1958 it is expected that negotiations will begin with an additional six districts.

Power sales contracts.—Effective August 27, 1951, a wheeling contract between the Bureau and the Pacific Gas & Electric Co. covering power transmission became operative. On that date the Bureau commenced service to the first preference customer and to Federal installations by the conveyance of Bureau power over the transmission lines of the company. Currently 25 power sales contracts are in force—24 with preference customers, 1 with a private utility.

Physical data

Feature	Type	Capacity	Height	Length
Dams and reservoirs:		*Acre-feet*	*Feet*	*Feet*
Shasta	Concrete variable arch gravity	4,500,000	602	3,460
Keswick	Concrete gravity	24,000	159	1,046
Friant	do	520,000	319	3,488
Folsom	Concrete and earth fill	1,000,000	340	10,200
Nimbus	Earth fill	7,600	76	1,093
Trinity	do	2,500,000	450	3,300
Sly Park	do	45,000	130	760
Whiskeytown	do	250,000	278	2,150
Powerplants:		*Kilowatts*		
Shasta		379,000		
Keswick		75,000		
Folsom		162,000		
Nimbus		13,500		
Trinity		96,000		
Clear Creek		130,000		
Spring Creek		143,000		
Lewiston		850		
				Miles
Transmission lines	69 to 230 kilovolts			762
Pumping plants:		*Horsepower*		
Tracy		135,000		
Contra Costa		3,050		
		Cubic feet per second		
Canals:				
Delta-Mendota	Concrete	4,600		117
Friant-Kern	do	5,000		153
Contra Costa	do	350		48
Madera	do	1,000		36
Corning	Earth lined	500 to 28		21
Tehama-Colusa	do	2,000		126
Distribution systems:		*Acres*		
Contra Costa		7,200		
Delta-Mendota		184,650		
Madera		162,250		
Friant-Kern		566,600		

Acres to be served:	*Acres*
Full supply	292,050
Supplemental supply	893,350
Total	1,185,400

Status.—As of June 30, 1956, the project was 60-percent complete on an obligation basis. Of the balance to complete after this date, approximately 75 percent is represented by the recently authorized Trinity River division. While all the initial features of the project have been in operation since 1951, a significant construction program is underway during the current fiscal year (1957). Ranking first and accounting for over 40 percent of the total annual program is work on Trinity River division. Contract for Trinity Dam will be awarded the third quarter of fiscal year 1957. Work will continue on the diversion tunnel and on the camp. Other major items include award of contract for the Lewiston-Clear Creek Tunnel, land acquisition, and highway relocation. The Bureau of Reclamation has made a study on the possibility of the sale of falling water, which may affect the requirement for future appropriations for power facilities for the Trinity River division. Ranking second in program amount, approximately 30 percent of the total annual program will be further construction of the Friant-Kern distribution system. Other items in the program include the completion of the Delta fish-protection facilities and the Contra Costa distribution system. Folsom Dam and power facilities, as well as the Nimbus fish-protection facilities, will be virtually completed. Work will continue on the Corning Canal and on water-rights studies and on investigations for the Cow Creek features. It is expected that a contract will be executed with the water users under Public Law 130 for the construction at the Terra Bella distribution system.

WORK PROPOSED, FISCAL YEAR 1958

Trinity Dam and facilities, $10,586,000.—This amount is required primarily for contractors' earnings on the prime contract as well as for land and land rights and county road relocation. Award of dam construction contract is scheduled

for the third quarter of fiscal year 1957. Equipment and trucks will also be purchased to provide fish-protection facilities.

Whiskeytown Dam and Reservoir, $398,000.—This amount will be used for the cost of designs and specifications for the dam, surveys for relocation of highway No. 299, and for land nights.

Lewiston diversion dam and facilities,$313,000.—These funds will be utilized for the procurement of land and land rights and for preparation of specifications for construction of the dam to be started in fiscal year 1959.

Clear Creek tunnel, $5,527,000.—This amount will be required to cover contract earnings on the tunnel.

Spring Creek tunnel, $248,000.—These funds will be used for investigation and surveys.

General property, $35,600.—Installation of the radio network in the Trinity division will be initiated.

Corning Canal and facilities, $1,407,000.—The program provides for completion of the canal and the initiation of construction of the relift facilities and the pumping plant dependent upon execution of water service contracts.

Tehama-Colusa Canal, $50,000..—These funds will be used to continue investigations of the lower end of the canal area to provide means to service an additional service area.

American River division, $75,202.—The program provides for completion of surfacing and grading the left abutment area of the Folsom Dam.

Water rights (Sacramento and San Joaquin Rivers), $261,367.—Riparian land delineation, and analysis of data on use of water from the Sacramento River, its tributaries, and the Sacramento-San Joaquin Delta will continue. Activities will also be continued, as required, on the cooperative program covered by the "Memorandum of understanding relative to a general approach to negotiations for settlement of water diversions from the Sacramento River and the Sacramento-San Joaquin Delta with the objective of avoiding litigation." The program also provides for litigation, negotiation, and settlement of water-right claims of landowners along the San Joaquin River.

Central Valley waterfowl conservation, $52,819.—This program continues the activity under Public Law 674, 83d Congress (68 Stat. 879). The funds will be used to complete slough levee and ditch at the Mendota pool.

Friant-Kern Canal, $179,900.—The program provides for furnishing and installing measuring devices for the Sausalito Irrigation District and for rehabilitation of certain earth-lined and concrete reaches of the canal.

Friant-Kern distribution systems, $5,567,800.—These funds will be used for further construction of extensions to unit 1 of the southern San Joaquin municipal utility extensions, if a repayment contract is executed, to initiate construction of the distribution system for the Stone Corral Irrigation District and to virtually complete the Shafter-Wasco distribution system.

Distribution systems, $5,200,000.—Contracts will be executed with the Porterville and Sausalito districts and constrution of the distribution systems initiated under Public Law 130. This work will be financed with funds under the loan program distribution systems activity.

Contribution to civil service retirement fund, $246,000.—Initial year contribution to civil-service retirement fund.

Investigation of abandoned or unprogramed work, $258,249.—Represents prior investigation costs of distribution system now to be constructed under loan program.

Adjustments, $5,244,935.—This figure includes the $5,200,000 cost of distribution systems being built under Public Law 130 which do not require project funds and some minor cost adjustments.

Other expenditures and credits, $501,496.—Cost of service facilities, stores and investigations financed from fiscal year 1958 which will be distributed to permanent property in subsequent years.

TRINITY RIVER DIVISION PROJECT

Chairman HAYDEN. The Trinity River division is a big project. I note that the total estimated cost is $225 million.

Is the estimate of $17,107,600 adequate to maintain an economic construction program?

Mr. DEXHEIMER. That is the budget request, Mr. Chairman. We have awarded contracts for the Clear Creek tunnel and for the Trinity Dam, and we have other contracts for a diversion tunnel and certain housing and roads that we need to build in that area. Since the budget request went in, we have had indications from the major contractors up there that their prospective earnings might be somewhat greater than we could provide by this.

Chairman HAYDEN. How much was your request to the Bureau of the Budget for the Trinity division?

Mr. DEXHEIMER. $17 million.

Chairman HAYDEN. That is all you asked. I was wondering whether you asked for any more than that?

Mr. DEXHEIMER. We requested about $2 million more than that, Mr. Chairman, but in working out the budget it was cut down to the $17 million.

Chairman HAYDEN. You speak of the opinion of the contractor. What, in your opinion, would be required in fiscal year 1958 to maintain the most economical rate of construction?

FUNDS NEEDED IN 1958

Mr. DEXHEIMER. Mr. Chairman, in accordance with the information that we have received from our contractors, we would estimate that we would need about $27 million on the Trinity River division in fiscal 1958 to meet their contract payments and carry on the other work that we would need to do in order to keep the project going. That is, we would need to do further investigation work, writing specifications for other features of the project, and so on, in order to complete it on an economical rate.

Chairman HAYDEN. If Congress fails to give you enough money to carry on the work the way it should be done, will the contractor have to shut down?

Mr. DEXHEIMER. We would notify the contractor of the funds available for earnings under his contract. Then it would be up to him to determine whether he was going to work at a certain rate for 9 months and then shut down, or spread the work all over the 12 months. In any event, it would slow the work down if he does not have adequate funds or is not willing to finance it himself, and that is hardly likely under the present rates of financing that contractors have to pay.

Chairman HAYDEN. Would you save money in the long run if more money were provided?

Mr. DEXHEIMER. Yes, sir.

PROVISIONS OF AUTHORIZATION

Chairman HAYDEN. As I recall, the authorizing legislation contained a provision whereby the power facilities of the Trinity development might be built by non-Federal groups. What is the status of the power facilities?

Mr. DEXHEIMER. The authorization provides that it be built by the Bureau of Reclamation as to power facilities. There was an additional clause in the authorizing legislation which required the Secretary of the Interior to report within 18 months of the date of the act on his negotiations with any other group than the Federal Gov-

ernment for building the power facilities. That report was made as scheduled on February 12 of this year to the Congress.

Up to this time there have been no hearings set up on that proposal. A bill has been introduced, I believe, which would provide for a cooperative arrangement with the Pacific Gas & Electric Co. who have proposed to build power facilities, but we are very desirous of having a decision by the Congress on that because, if we were to provide for the power facilities in our fiscal 1959 budget, we would need to request money to order the machinery which requires about 3 years to get after you order it.

NO DECISION ON POWER DEVELOPMENT

Chairman HAYDEN. Your estimate does not include any funds for development of power now?

Mr. DEXHEIMER. Not in 1958; no, sir.

Chairman HAYDEN. What you are waiting for then is to determine whether, as a result of these negotiations, Congress will pass an authorizing act that allows the power company to do the work?

Mr. DEXHEIMER. Yes, sir.

Senator DWORSHAK. Will work in 1958 be delayed because no decision has been reached on the power aspects of the project?

Mr. DEXHEIMER. No, sir; but it would be delayed if a decision is not made so that we can submit our budget requests for the following fiscal year in order to purchase the equipment.

Senator DWORSHAK. But the actual construction in fiscal 1958 will not be slowed down? You will go ahead on schedule?

Mr. DEXHEIMER. It will not be slowed down for that reason; no, sir.

Senator DWORSHAK. What was that report which was submitted to the Congress about power facilities on the Trinity?

Mr. DEXHEIMER. That was a report on the proposal of the Pacific Gas & Electric Co. to build these powerplants in connection with the Trinity division of the Central Valley project.

Senator DWORSHAK. That was recommended by whom?

Mr. DEXHEIMER. It was recommended by Secretary of the Interior Seaton.

Senator DWORSHAK. That was last February?

Mr. DEXHEIMER. Yes, sir.

PROVISIONS OF BUREAU PROPOSED

Senator DWORSHAK. Would there be any charge for falling water, or would the non-Federal agency have to participate in the cost of constructing the Trinity Dam? Were those details completely formulated?

Mr. DEXHEIMER. Those are in the proposal and in our report to the Congress, and would provide an annual payment of an average of about $4.5 million for falling water, and the company proposed that they would finance and build the power features.

Senator DWORSHAK. Thank you.

APPLICATION OF HOUSE REDUCTION

Chairman HAYDEN. The House reduction in the estimate of $2,265,000 was applied to the following facilities:

Friant-Kern distribution system, $888,000.

Corning Canal, $1,377,000.

With respect to the Friant-Kern distribution system, I understand that some of the lands involved here are class 6 lands which the Secretary could not certify as irrigable lands. Is that correct?

PROBLEM UNDER IRRIGABILITY PROVISION

Mr. DOMINY. Yes, sir. The problem there, Mr. Chairman, arises from the Appropriations Committee instructions to us not to award construction contracts unless the Secretary could certify as to the irrigability of the land, and, in this case, because a little more than half of the area to be included for service is considered to be nonirrigable by our standards, we have been unable to certify. Now, the district on the other hand considers that the land is irrigable and it is willing to bind the entire area of the irrigation district as security for the payments on this land which we consider to be nonirrigable.

Because of the requirement in the appropriations language we are not able to certify, and, therefore, we are not able to spend the money unless Congress directs us to do so in this particular instance.

Chairman HAYDEN. If the committee decided to provide the funds for the distribution system to serve the district that includes the class 6 lands, it would require an exemption in the act to the requirement in the Department of the Interior Appropriation Act, 1953 that requires the certification of the Secretary; would it not?

Mr. DOMINY. There would have to be some direct language, in our opinion, that would relieve us of the present limitation.

CORNING CANAL

Chairman HAYDEN. With respect to the Corning Canal, the House committee refers to the action of the State securities commission with respect to the 160-acre limitation in your contracts.

I have heard of the decision of the Supreme Court of California with respect to the 160-acre limitation. Will you please comment on this decision, and tell the committee how it applies to the Corning Canal?

Mr. DEXHEIMER. At the time we were before the House Appropriations Committee, Mr. Chairman, the proposed contract with the Corning district had been turned down by the California Securities Commission because of a certain California Supreme Court decision regarding the 160-acre limitation. Subsequent to our hearings before the House Appropriations Committee on, I believe, April 29, the contract was revised by the Bureau of Reclamation and acceptable to the Corning district, and was again presented to the California Securities Commission. That time the California Securities Commission approved the contract.

However, those contracts under California law must be validated by the courts of California. With the California Supreme Court decision saying that, in effect, a 160-acre limitation as contained in

our contracts is illegal under California law, it is a little doubtful whether the California courts would validate this particular contract. However, that could be settled quickly, or it might be prolonged.

Chairman HAYDEN. Knowing something about courts and lawyers and how they can use time, I would not anticipate early action. You are not asking that the money be restored?

Mr. DOMINY. No, sir. We have not appealed on that item, sir.

Mr. DEXHEIMER. We think, Mr. Chairman, that when that is settled we will have an opportunity to again request funds. However, as I mentioned, those funds could be utilized in other places in the Central Valley project.

ALLOWANCE FOR SANTA MARIA, SOLANO, AND VENTURA RIVER PROJECTS

Chairman HAYDEN. The House committee recommended the allowance of the following budget estimates:

Santa Maria project, $5,627,000; Solano project, $3,672,000; and Ventura River project, $12 million. Are these projects proceeding on schedule?

Mr. DEXHEIMER. Yes, sir. Essentially, they are all proceeding on schedule. We have a right-of-way problem on the Ventura project that has held them out of certain areas for a little while, but we think that will be made up.

Chairman HAYDEN. I will include the detailed justifications for these projects in the record.

(The justifications referred to follow:)

SANTA MARIA PROJECT, CALIFORNIA

Location

Northern Santa Barbara County and southern San Luis Obispo County. Vaquero Dam and Reservoir, the only physical features of the project, are located about 10 miles northeast of the city of Santa Maria, Calif.

Authorization

By the act of September 3, 1954 (68 Stat. 1190).

Description

The primary purpose of the project is to recharge the ground water of the Santa Maria Valley. To do this an earth filled dam, 1,775 feet long and 186 feet high with a reservoir of 239,000 acre-feet, is being constructed on Cuyama River. Essentially the plan of operation is to release the stored water into the riverbed at a rate equal to or less than the percolation capacity of the Santa Maria River Channel. Thus all holdover would be maintained in a ground-water reservoir and no surface water delivery to irrigation will be made.

Benefit-cost ratio 3.7 to 1

Based on DPR approved April 20, 1956.

Summarized financial data

Estimated total obligations	$14,754,263
Total obligations to June 30, 1956	531,511
Total obligations, fiscal year 1957	5,170,183
Total obligations, fiscal year 1958	6,150,100
Balance to complete	2,902,469

On a cost basis the fiscal year 1958 program will total $6,169,765. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$16,982,000	$16,684,665
1958 congressional justification	15,058,000	14,754,263
Decrease	−1,924,000	−1,930,402

The decrease in total estimated cost from $16,982,000 to $15,058,000 is due primarily to refinement of the estimate based on favorable contract prices and reduced requirement for land and land rights.

Status

The contract for construction of the dam was awarded June 14, 1956, and work was initiated shortly thereafter. As of June 30, 1957, the project will be approximately 40 percent complete.

Allocation of estimated total project cost

Reimbursable: Irrigation	$12,045,000
Nonreimbursable: Flood control	3,013,000
Total	15,058,000

Repayment of reimbursable costs

By irrigation water users (Santa Barbara County Water Agency) $12,045,000

Repayment costs per acre

Federal investment per acre.—To be repaid by the ad valorem tax, $311.

Annual water user charges.—These costs are to be repaid through tax assessments on all taxable property in Santa Maria Water Conservation District.

Repayment contracts

A repayment contract covering all reimbursable costs has been executed. This contract, with the Santa Barbara County Water Agency, requires the payment of $13,969,000 over a 40-year period following a 2-year development period which will begin after the project is complete and water storage begins. The Santa Barbara County Water Agency has in turn contracted with the Santa Maria Valley Water Conservation District for the repayment of all costs except for $50,000 annually which will be raised by a countywide ad-valorem tax collected by the agency.

Physical data

Feature.—Vaquero Dam.
Type.—Earthfill.
Capacity.—239,000 acre-feet.
Height.—186 feet.
Length.—1,775 feet.

Acres to be served

Full supply	3,000
Supplemental supply	35,000
Total	[1] 38,700

[1] The canals and distribution works for these lands are now in existence or will be constructed by local interests and are not a part of the authorized project.

Work proposed, fiscal year 1958

Vaquero Dam and facilities, $6,142,665.—This amount will be required for earnings on the dam construction contract, right-of-way acquisition, and reservoir clearing. Also funds are required for the contract with the State of California covering highway relocation being performed by the State.

Contribution to civil service retirement fund, $26,700.—Initial year contribution to civil service retirement fund.

Adjustments, $400.—Anticipated minor cost adjustments.

Other expenditures and credits, —$19,665.—Cost of service facilities accrued in prior years which will be distributed to permanent property in the budget year.

SOLANO PROJECT, CALIFORNIA

Location

In Solano County, Calif., adjacent to the northeast extremity of San Francisco Bay, Monticello Reservoir area extends northwest into portion of Napa County, Calif.

Authorization

By Secretary of the Interior, November 11, 1948, by approval of a project feasibility report under provision of section 9 (a) of the Reclamation Project Act of 1939 (H. Doc. 65, 81st Cong.).

Description

The purpose of the project is to provide irrigation water in a service area with a rapidly decreasing supply, and to provide municipal and industrial water to cities and Federal installations facing an equally serious shortage. The project provides for a storage reservoir of approximately 1,600,000 acre-feet created by the construction of a concrete arch dam with a crest length of 1,017 feet and 276 feet high, located on Putah Creek below Monticello; a small concerte and earth-fill diversion dam downstream; a 38-mile main canal with a small terminal reservoir, and the necessary wasteways, laterals, and drainage works. The distribution system may be constructed by the water users through a loan from the United States under Public Law 130, 84th Congress, as amended.

Benefit-cost ratio 3.8 to 1

Based on DPR approved February 24, 1953.

Summarized financial data

Estimated total obligations	$39,109,000
Total obligations to June 30, 1956	21,709,794
Total obligations, fiscal year 1957	10,759,508
Total obligations, fiscal year 1958	3,714,000
Balance to complete	2,925,698

On a cost basis the fiscal year 1958 program will total $3,732,000. The narrative justification which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$51,611,000	$51,611,000
1958 congressional justification	52,410,000	39,109,000
Change	799,000	—11,902,000

The total estimated cost change is the result of the following increases: $240,000 for foundation excavation and concrete in Monticello Dam, $240,000 for clearing of Monticello Reservoir, $270,000 for fencing of Monticello Reservoir, $395,000 for Putah diversion dam based on final design, $134,000 for construction of low-level bridge across the Putah diversion dam pool. These increases are in part offset by decrease of $250,000 in final costs of State highway relocation and decrease of $230,000 in estimate for Putah south canal due to favorable contract amount on the first contract. The decrease in total estimated obligations is due primarily to financing distribution system with funds included in loan program under Public Law 130.

Status

Construction began in August 1953. As of June 30, 1957, the project will be approximately 63 percent complete. As of June 30, 1957, Monticello Dam and Reservoir will be completed and storage of water started. Highway relocation will be completed as well as the first reach of the Putah south canal. Construction of the second and third reaches will be underway and the construction

of the Putah diversion dam will be nearing completion. It is expected that a contract will be executed with the water users under Public Law 130 for construction of the irrigation distribution system.

Allocation of estimated total project costs

Reimbursable:	
Irrigation	$32,902,300
Municipal and industrial water	3,098,700
Power	[1] 113,000
Distribution and drainage system	15,164,000
Subtotal	51,278,000
Nonreimbursable: Flood control	1,132,000
Total	52,410,000

[1] If Monticello powerplant is authorized and constructed, power revenues will repay $113,000 with interest, otherwise the costs incurred will be amortized by the irrigation and municipal water revenues after repayment of their allocated cost.

Repayment of reimbursable costs

By irrigation water users through water rates	$22,018,000
By irrigation water users for distribution and drainage	15,164,000
By municipal water users	13,983,000
By power revenue	[1] 113,000
Total	51,278,000

[1] If Monticello powerplant is authorized and constructed, power revenues will repay $113,000 with interest, otherwise the costs incurred will be amortized by the irrigation and municipal water revenues after repayment of their allocated cost.

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$229
To be repaid from municipal water	113
Total	342
Annual water user charges:	
Water service charge (average)	6.52
Distribution systems:	
Construction	4.31
Operation and maintenance	4.42
Total	15.25

Repayment contracts

A contract for furnishing the entire project water supply was executed March 7, 1955, with the Solano County Flood Control and Water Conservation District. Member unit contracts with the Solano Irrigation District and the cities of Vallejo, Fairfield, and Suisun, all in Solano County, were executed on June 28, 1955. Repayment contract negotiations are well advanced with the Solano Irrigation District in connection with the proposed loan to the district for construction of the distribution and drainage systems to serve the district.

Physical data

Feature	Type	Capacity	Height	Length
Monticello Dam	Concrete arch	1,600,000 acre-feet	302 feet (estimated)	1,017 feet.
Putah diversion dam	Gated concrete weir with earth-fill nonoverflow section.	350 acre-feet	26 feet	750 feet.
Putah south canal distribution system.	Concrete lined open lateral and concrete pipe.	956 to 115 cubic feet per second.		38 miles.

NOTE.—Serves 71,881 acres full supply; 24,187 acres supplemental supply; and 27,200 acre-feet municipal and industrial water.

Acres to be served	*Acres*
Full supply	71,881
Supplemental supply	24,187
Total	96,068

Work proposed, fiscal year 1958

Monticello Dam and facilities, $70,000.—The program provides for minor contingent items of completion work on Monticello Dam and Reservoir.

Putah diversion dam and south canal, $3,621,000.—Provides for completion of Putah diversion dam and clearing of the diversion dam pool area; for continuation and completion of construction of reaches 2 and 3 of Putah south canal; and for initial construction and major progress on construction of reach 4 of Putah south canal.

Distribution system, $5,000,000.—These costs represent initiation of construction of the distribution system by the water users under Public Law 130. This work will be financed with funds appropriated under the loan program distribution systems activity.

Contribution to civil service retirement fund, $40,100.—Initial year contribution to civil service retirement fund.

Adjustments, —$5,000,100.—Represents costs applicable to distribution systems which are financed by funds appropriated under the loan program and other anticipated cost adjustments.

Other expenditures and credits, —$18,000.—Cost of service facilities accrued in prior years which will be distributed to permanent property in fiscal year 1958.

VENTURA RIVER PROJECT, CALIFORNIA

Location

The Ventura River project area is on California's southern coast in Ventura County about 60 miles northwest of Los Angeles. The area is composed of mountains of the coastal range and the valley of Ventura River and its tributaries.

Authorization

Authorized for construction by the act of March 1, 1956 (70 Stat. 32).

Description

The primary purpose of the project is to provide a full water supply for the irrigation of 10,700 acres of land, supplemental service to 2,500 acres, and an annual supply of 15,600 acre-feet of water for municipal and industrial purposes. Facilities of the project include Casitas Dam and Reservoir on Coyote Creek, with a storage capacity of 250,000 acre-feet, Robles diversion dam on the Ventura River, and the Robles-Casitas Canal to divert and convey Ventura River water to the Casitas Reservoir, and conveyance systems consisting of about 33 miles of pipeline, 5 pumping plants, and 5 balancing reservoirs.

Summarized financial data

Estimated total obligations	$26,800,000
Total obligations to June 30, 1956	[1]
Total obligation, fiscal year 1957	[2] 6,522,884
Total obligations, fiscal year 1958	12,000,000
Balance to complete	8,277,116

[1] Preconstruction work financed from contributions by local interests and small amount of general investigations funds.
[2] Includes $122,884 contributed by local interests.

On a cost basis, the fiscal year 1958 program will total $11,976,000. The narrative justification which follows explains the fiscal year 1958 cost program and its relation to obligations.

Status

Construction was begun on August 25, 1956. As of June 30, 1957, the project will be approximately 25-percent complete. Construction will be underway on Casitas Dam and Reservoir, Robles-Casitas diversional canal. Accumulation of detailed data preparatory to initiating construction will be underway for the Robles diversion dam and the Rincon and Ojai Valley and Ventura facilities.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$15,823,000
Municipal and industrial water supply	11,777,000
Subtotal, reimbursable	27,600,000
Nonreimbursable: Recreation	100,000
Subtotal, nonreimbursable	100,000
Total	27,700,000

Repayment of reimbursable costs

By irrigation water users	$11,320,000
By municipal and industrial water-supply users	16,280,000
Total	27,600,000

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$858
To be repaid from municipal and industrial water-supply users	342
Total	1,200
Annual water-user charges: Construction and operation and maintenance	50
Total	50

Repayment contracts

A contract has been executed with the Ventura River Municipal Water District for the repayment of all reimbursable costs for constructing the project.

Physical data

Feature	Type	Capacity	Height (feet)	Length
Casitas Dam and Reservoir	Earth fill	250,000 acre-feet	275	2,050 feet.
Robles diversion dam	Rockfill		8	520 feet.
Robles-Casitas diversion canal	Concrete lines	500 c. f. s.		5.25 miles.
Conveyance systems:				
Ventura River	Pressure pipe	135 c. f. s.		
Ojai Valley	do	64 c. f. s.		
Rincon	do	9.5 c. f. s.		

Acres to be served

	Acres
Full supply	10,700
Supplemental supply	2,500
Total	13,200

Benefit-cost ratio: 4.25 to 1.

Work proposed, fiscal year 1958

Casitas Dam and Reservoir, $6,117,000.—Work will be continued on the prime contract awarded in fiscal year 1957. Acquisition of land rights and relocation of utilities will continue as well as the purchase of materials. Award of contracts for clearing the reservoir area and relocation of State Highway No. 151, Sign Route 150 will be made early in the fiscal year. Work to be performed by the Park Service for recreation facilities will continue during the year.

Robles Diversion Dam, $321,000.—Construction will continue during the fiscal year. These funds are required for contract earnings.

Robles-Casitas diversion canal, $870,000.—Acquisition of rights-of-way and work under the prime contract awarded in fiscal year 1957 will continue during the year.

Ventura River facilities, $1,960,000.—Acquisition of rights-of-way on the Oak View and Casitas pressure-belt system will continue. Award of contracts for construction of the pressure-belt systems, Ventura Avenue pumping plants, Oak View balancing reservoir and control and chlorination stations, will be made early in the fiscal year.

Ojai Valley facilities, $2,054,000.—Acquisition of rights-of-way will continue during the year. Award of contracts for construction of Villanova and Ojai pressure-belt systems, upper Ojai mains, pumping plants, balancing reservoirs, and chlorination stations will be made early in the fiscal year.

Rincon facilities, $646,900.—Acquisition of rights-of-way will continue during the year. Award of contracts for Rincon conduits, pumping plant, balancing reservoir, and chlorinating stations will be made early in the year.

Contribution to civil-service retirement fund, $60,100.—Initial year contribution to civil-service retirement fund.

Adjustments.—$53,000.—Represents expenditures from contributed funds not requiring appropriation and other minor adjustments.

Other expenditures and credits, $24,000.—Represents expenditures for stores and service facilities which will be charged to permanent project features in future years.

TWO COLORADO PROJECTS

Chairman HAYDEN. The House committee recommended the allowance of the budget estimate for the two Colorado projects. They are: Collbran project, $2 million, and Colorado-Big Thompson project, $549,000.

(The justifications referred to follow:)

COLORADO-BIG THOMPSON PROJECT, COLORADO

Location

The project is located in north-central Colorado, and extends eastward from the headwaters of the Colorado River in the general vicinity of Grand Lake, Granby, and Kremmling across the Continental Divide to the headwaters of the Big Thompson River near Estes Park and eastward to farmlands in northeastern Colorado.

Authorization

The Colorado-Big Thompson project was authorized by a finding of feasibility by the Secretary of the Interior, dated December 20, 1937, approved by the President on December 21, 1937. Funds were first appropriated in the Interior Department Appropriation Act of August 9, 1937 (50 Stat. 595).

Description

The primary purpose of the project is to provide a supplemental water supply for the irrigation of 615,000 acres of irrigated land in northeastern Colorado. Surplus water of the Colorado River is stored in Lake Granby and pumped by the Granby pumping plant into Shadow Mountain Lake. The water then flows by gravity through Grand Lake into the Alva B. Adams Tunnel through the Continental Divide to the eastern slope. Continuing by gravity the diverted water flows through a system of conduits and powerplants to be finally stored in two east-slope storage reservoirs—Horsetooth and Carter Lake—with a combined total capicity of 263,982 acre-feet. Water from these reservoirs is released through supply canals into the Cache La Poudre River, the Little and Big Thompson Rivers, Boulder Creek, St. Vrain Creek, and South Platte River, from which it is diverted by existing irrigation facilities. Green Mountain Reservoir, located on the Blue River—a tributary of the Colorado—stores excess runoff of that stream for later release to the Colorado River to replace water being withheld by project facilities during periods when downstream rights would otherwise be infringed upon. Additional releases may be made to the river according to provisions and interpretation of operating requirements set forth in Senate Document No. 80.

Completed powerplants of the project, which have an installed capacity of 179,450 kilowatts, are connected by a transmission system, interconnected with power systems of the North Platte, Kendrick, Riverton, Shoshone, and Missouri

River Basin projects, in addition to other private and publicly owned power systems.

Benefit-to-cost ratio

2.4 to 1.0.

Summarized financial data

Estimated total obligations	$158,929,626
Total obligations to June 30, 1956	157,650,048
Total obligation, fiscal year 1957	594,480
Total obligations, fiscal year 1958	549,000
Balance to complete	136,098

On a cost basis the fiscal year 1958 program will total $566,056. The narrative justification, which follows, explains the fiscal year 1958 cost program and relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$160,066,000	$159,370,758
1958 congressional justification	158,998,545	158,929,626
Decrease	1,067,455	441,132

The decrease in estimated costs has resulted from adjustments in costs of project facilities and other miscellaneous adjustments. The change in total obligations has resulted from a downward adjustment in estimated transfers, credits, and other expenditure accounts.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$100,661,583
Power	[1] 58,336,962
Total	158,998,545

[1] Allocation presently includes $1,355,086 cost of Salida-Gunnison transmission line and substations which cost is assigned to Fryingpan-Arkansas project for repayment on authorization.

Repayment of reimbursable costs

Irrigation:	
Irrigation water users by repayment of water rental contracts	$28,916,700
Repaid by surplus power revenues	71,744,883
Power: Repaid with interest by project power revenues	[1] 58,336,962
Total	158,998,545

[1] Allocation presently includes $1,355,086 cost of Salida-Gunnison transmission line and substations which cost is assigned to Fryingpan-Arkansas project for repayment on authorization project cost does not include $2,205,124 (interest during construction) which is to be included in repayment study and repaid by power revenues.

Repayment costs per acre [1]

Federal investment per acre:	
To be repaid from water users	$47
To be repaid from power revenues	116
Total	163
Annual water user charges (per acre-foot): [2]	
Water service charge (average)	$1.55
Operation and maintenance	.58
Total	2.13

[1] Costs per acre derived by use of 615,000 irrigated acres in benefited area.

[2] 1 acre-foot defined in allotment contracts as one three-hundred-and-ten thousandths of annual supply. Additional revenue is obtained by the conservancy district to help meet its operation and maintenance and construction installments by an ad valorem tax on all property within Northern Colorado Water Conservancy district

Repayment contracts

A contract, dated July 5, 1938, with the Northern Colorado Water Conservancy District provides for the payment of $25 million over a 40-year period. This contract was amended July 14, 1950, and October 12, 1954, increasing the district's obligation by $1,031,000 to be paid in equal installments concurrently with the original obligation. On December 15, 1950, an interim contract was entered into with the conservancy district for the rental of water prior to the commencement of the construction repayment installments. This contract as amended September 10, 1956, assures payment of $2,885,700 to apply on construction costs and constitutes additional payment to the United States for project construction costs not covered by the contracts dated July 5, 1938, July 14, 1950, and October 12, 1954. Further, under the September 10, 1956, contract, the district is to assume its full share of operation and maintenance cost beginning January 1, 1957, as contemplated in the contract of July 5, 1938. This contract also increased the district's operating reserve consistent with the increase in national price levels and the enlargement of project facilities over that contemplated by the 1938 contract.

Physical data

Feature	Type	Capacity	Height	Length
Dams, reservoirs, and diversion dams:				
Green Mountain Dam and Reservoir.	Earth and rock fill	154,645 acre-feet	309 feet	1,150 feet.
Granby Dam and Lake Granby.	do	539,758 acre-feet	298 feet	861 feet.
Carter Lake Dam and Lake	do	112,230 acre-feet	214 feet	1,235 feet.
Horsetooth Dam and Reservoir.	do	151,752 acre-feet	155 feet	1,840 feet.
Other (3)	Various	31,990 acre-feet		
Canals and conduits	do	8–1,500 cubic feet per second.		101.8 miles.
Tunnels	Concrete lined			
Alva B. Adams		550 cubic feet per second.		13.1 miles.
Others (8)		375–1,300 cubic feet per second.		15.0 miles.
Powerplants:				
Estes (3 units)		45,000 kilowatts		
Flatiron (3 units)		71,500 kilowatts		
Other Plants (4)		75,900 kilowatts		
Pumping plants:				
Granby (3 units)		600 cubic feet per second.	186 feet maximum lift.	
Other plants (2)		770 cubic feet per second.	175 and 290 feet maximum lift.	
Transmission system		2.4–115 kilovolts		793.7 miles.
Switchyard and substations 43 [1]		531,843 kilovolt-amperes.		

[1] Excludes Muddy Pass and metering stations, but includes 2 mobile substations and future Big Thompson switchyard and the Erie tap.

Acres to be served

Full supply	0
Supplemental supply	615,000
Total	615,000

Status

Project construction began in 1938. With the exception of the Big Thompson powerplant and appurtenant facilities, the project has been completed and all features placed in operation. Minor completion work is underway and will be completed in fiscal year 1957 on fencing around the Green Mountain switchyard and on the South Platte supply canal. The Loveland Camp buildings, a temporary facility used during the large construction program in the Loveland area, are being disposed of by the General Services Administration. Final plans and specifications are being prepared for the Big Thompson powerplant, switchyard, the 13.8-kilovolt transmission extending from the Big Thompson powerplant to Flatiron switchyard and the Big Thompson Bay in the Flatiron switchyard with award of equipment and construction contracts scheduled during fiscal year

1957. Studies relating to the extension of the project collection and storage facilities to meet the total water diversion contemplated in Senate Document 80 are expected to be completed in fiscal year 1957. A Federal court decree has been handed down in civil actions 2782, 5016 and 5017, and pending clarification of this decree including the interveners' rights it is anticipated that Bureau activity will be required extending into fiscal year 1959.

Work proposed, fiscal year 1958

Big Thompson powerplant, $515,356.—This program provides for continued work on prime contract for construction of the powerplant awarded in fiscal year 1957, and payments for the generator, turbine, and related equipment for which the contract was awarded in fiscal year 1957. Completion of this feature is scheduled in fiscal year 1959.

Big Thompson powerplant switchyard, $22,000.—These funds will provide for contract payments on switchyard equipment and for progress payments on the erection contract. Both contracts are scheduled for award in fiscal year 1957.

Minor work projectwide, $10,700—The program provides $1,200 for "as-built" drawings, technical records and operating criteria; $2,000 for anticipated costs in connection with civil action 2782; $5,000 for reviews and necessary revision in the report on the western slope extension of collection and storage system; $500 for National Park Service costs in connection with project recreational facilities; and $2,000 for miscellaneous and delayed rights-of-way claims.

Contribution to civil service retirement fund, $10,400.—Initial year contribution to civil service retirement fund.

Adjustments, $7,600.—Cost adjustment resulting from salvage of materials to be transferred from project in budget year by nonappropriation transfer.

Other expenditures and credits, —$17,056.—Represents costs of stores and service facilities procured in prior years which will be distributed to permanent property or salvaged in the budget year.

COLIBRAN PROJECT, COLORADO

Location

Mesa County, Colo., on the west slope of the Continental Divide in the drainage basin of the Colorado River.

Authorization

The project was authorized for construction by act of July 3, 1952 (66 Stat. 325).

Description

The primary purpose of the project is to provide a full water supply for the irrigation of 2,310 acres of new land and a supplemental supply for 18,340 acres of inadequately irrigated land located in Plateau Valley. The project is also designed to have an installed capacity for the generation of 13,000 kilowatts of hydroelectric power. Project facilities include Vega Dam and Reservoir, Bonham Dam and Reservoir, Southside Canal, Bonham-Cottonwood pipeline, and upper and lower Molina powerplants.

Benefit-cost ratio

1.6 to 1.

Summarized financial data

Estimated total obligations	$13,883,649
Total obligations to June 30, 1956	(1)
Total obligations, fiscal year 1957	970,000
Total obligations, fiscal year 1958	2,000,000
Balance to complete	10,913,649

[1] Preconstruction work financed from general investigations funds.

On a cost basis the fiscal year 1958 program will total $1,733,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
Congressional justification, fiscal year 1957	$14,006,000	$13,891,000
Congressional justification, fiscal year 1958	14,152,000	13,883,649
Change	+146,000	−7,351

The total estimated cost of the Collbran project has been increased from $14,006,000 to $14,062,000, principally due to inclusion of investigation costs for municipal water features and the addition of $90,000 for contribution to civil service retirement fund. The decrease in estimated total obligations is due to adjustment in the estimated for nonappropriation transfers.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$3,914,000
Power	9,992,000
Subtotal, reimbursable	13,906,000
Nonreimbursable:	
Fish and wildlife	100,000
Colorado River Development Fund expended on investigations	146,000
Subtotal, nonreimbursable	246,000
Total	14,152,000

Repayment of reimbursable costs

Irrigation:	
By water users	$1,070,000
By power revenues	2,844,000
Power: By power revenues	9,992,000
Total	13,906,000

Repayment cost per acre

Federal investment per acre:	
To be repaid from water users	$52
To be repaid from power revenue	137
Total	189
Annual water user charges:	
Construction	1.03
Operation and maintenance	1.00
Total	2.03

Repayment contracts

Negotiations are in progress with the Collbran Conservancy District. Execution of a repayment contract is scheduled for the latter part of fiscal year 1957. Negotiations this far and the interest of the Collbran Conservancy District indicate no difficulty will be encountered in procurement of a satisfactory repayment contract.

Physical data

Feature	Type	Capacity	Height	Length
			Feet	
Vega Dam and Reservoir	Rolled earth	33,500 acre-feet	145	1,970 feet.
Bonham Dam rehabilitation and betterment.	Earth and rock	1,300 acre-feet	38	1,700 feet.
Grand Mesa Reservoir rehabilitation and betterment.	do	5,203 acre-feet		
Southside canal	Earth lined	240 cubic feet per second.		29.2 miles.
Bonham-Cottonwood pipeline	Welded steel	50 cubic feet per second.		9 miles.
Upper Molina powerplant	Hydro	8,400 kilowatts		
Lower Molina powerplant	do	4,600 kilowatts		
Transmission facilities		69 kilovolts		22.5 miles.

Acres to be served

	Acres
Full supply	2,310
Supplemental	18,340
Total	20,650

Status

Construction is scheduled to begin in April 1957. As of June 30, 1957, the project will be approximately 7 percent complete. Construction will be underway on Vega Dam and Reservoir and the first section of Southside Canal. Preconstruction operations will be active in connection with the second section of Southside Canal. Project investigations in connections with remaining features will be continued.

Work proposed, fiscal year 1958

Vega Dam and Reservoir, $910,000.—The program provides for the continuation of construction activities on the dam and relocation of 6.6 miles of country road. Specifications will be issued, contract awarded, for construction on Leon-Park feeder canal.

Bonham Dam and Reservoir, $10,000.—Collection of design data will continue through the year with construction scheduled for 1959.

Grand Mesa Reservoirs, $5,000.—Collection of design data will continue throughout the year with construction scheduled for 1959.

Southside Canal, section 1, $400,000.—The program provides for the continuation of construction on the canal and structures. The canal will be approximately 35 percent complete by the end of the budget year.

Southside Canal, section 2, $57,000.—The program provides for award of contract and initiation of construction.

Bonham-Cottonwood pipeline, $60,000.—Collection of design data will be continued and specifications issued for the prime contract.

Upper Molina powerplant, $150,000.—Collection of design data and negotiations for purchase of water rights will be continued and specifications issued for the powerhouse and penstock.

Lower Molina powerplant, $110,000.—Collection of design data and negotiations for purchase of right-of-way will be continued throughout the year. Purchase of right-of-way is scheduled for the fourth quarter of the budget year.

Contributions to civil-service retirement fund, $31,000.—Initial year contribution to civil-service retirement fund.

Other expenditures and credits, $267,000.—Cost of service facilities and stores procured in the budget year which will be distributed to permanent property in subsequent years.

COMPLETION OF BIG THOMPSON PROJECT

Chairman HAYDEN. Do you have any comments on these projects?

Mr. GOLZE. We did want to call attention to the statement on page 17 of the House committee report on the Colorado-Big Thompson project, which says, "The funds provided for 1958 are for completion of the project." Our figures in the budget submitted show that the project will not be completed until fiscal year 1959.

Chairman HAYDEN. How much difference would that make in money?

Mr. GOLZE. It means we will be back for $136,000 in 1959.

Senator DWORSHAK. That is for what purpose?

Mr. GOLZE. We are working on a powerplant there, the Big Thompson powerplant, and the work carries on into 1959.

Mr. DEXHEIMER. I think the misunderstanding, Mr. Chairman, was that the powerplant is the last item of the Colorado-Big Thompson project and would complete the project when it is completed, but it will take some additional money in fiscal 1959 to complete it.

Chairman HAYDEN. Then, to make that perfectly clear, there should be some statement in our report that the project cannot be completed within the next fiscal year and that probably some additional funds would be needed; is that right?

Mr. GOLE. Yes, sir.

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. That would state the truth?

Mr. GOLZE. Yes, sir.

Senator DWORSHAK. How much has been expended on that project so far?

EXPENDITURES FOR ENTIRE PROJECT

Mr. GOLZE. As of June 30, 1956, for the entire project we have expended over $157 million.

Senator DWORSHAK. Is that not considerably higher than the original estimate?

Mr. GOLZE. The original project that was authorized back in the thirties was a different type of project with more limited facilities than as finally developed.

Senator DWORSHAK. When was construction actually started on the Colorado-Big Thompson project?

Mr. GOLZE. I think it was 1938.

Senator DWORSHAK. What was the cost then?

Mr. DEXHEIMER. I think the estimated cost was $45 million at that time, but it was stopped and started during the war and the project was completely changed in its concept and in its plan, and the development now is considerably different.

POWER GENERATION AT BIG THOMPSON

Senator DWORSHAK. How much power is generated there?

Mr. CROSTHWAIT. 183,950 kilowatts.

Senator DWORSHAK. Does the Bureau of Reclamation distribute that?

Mr. CROSTHWAIT. Yes, sir.

Chairman HAYDEN. Is there a market for that power?

Mr. DEXHEIMER. Yes, sir; the demand for a great deal more than we have available in that area.

Chairman HAYDEN. I am trying to get at whether the sale of power is expected to repay the cost of this project to the Treasury at the rate you are collecting money. How long is it going to take to pay it out?

Mr. DEXHEIMER. I think within 50 years, Mr. Chairman, but I do not have the figure available.

Chairman HAYDEN. I think the statement should be in the record. The project has cost more than was originally anticipated. On the other hand, your revenues are substantially greater. I think it would be wise to put a statement in the record as to the payout.

Mr. DEXHEIMER. Yes, sir.

(The statement referred to follows:)

The first powerplant on the Colorado-Big Thompson project was placed in operation in fiscal year 1943 and the last of the 6 powerplants is scheduled for completion in fiscal year 1959. The current estimate for payout of this project indicates that the commercial power allocation will be repaid in 39 years from initial operation and 23 years from the time all powerplants have been completed, or by fiscal year 1982. The irrigation costs allocated to be repaid from power revenues are estimated to be repaid in another 24 years after commercial power allocations have been repaid, or by fiscal year 2006, or 47 years after last irrigation investment. The total payout period for all investments assigned to be repaid from power revenues is 63 years from initial operation or 47 years after last project investment.

DISPOSITION OF POWER

Senator DWORSHAK. Who is getting the power? Is it the irrigation districts, the preference customers, the REA's, the municipalities, or non-Federal agencies?

Mr. DEXHEIMER. Part of it is used for pumping water for irrigation uses. The rest of it goes into a pool that is sold in the Missouri Basin with other power developed in that area.

LITTLE WOOD RIVER, IDAHO, PROJECT

Chairman HAYDEN. The next project is the Little Wood River project in Idaho. This is a new start. The House committee recommended the allowance of the budget estimate of $400,000 for the initiation of construction of this project.

The justifications will be included in the record.

(The justifications referred to follow:)

LITTLE WOOD RIVER PROJECT, IDAHO

Location

In Blaine County, near Carey, Idaho, south-central Idaho.

Authorization

Public Law 993, 84th Congress, 2d session, approved August 6, 1952 (70 Stat. 1059).

Description

Project involves raising the present Little Wood River Dam to increase the reservoir capacity from 12,100 to 30,000 acre-feet. The existing distribution and drainage facilities serving the 9,550 acres within the project are adequate.

Benefit-cost ratio

2.17 to 1.

Summarized financial data

Estimated total obligations	$2,151,000
Total obligations to June 30, 1956	(1)
Total obligations, fiscal year 1958	400,000
Balance to complete	1,751,000

[1] Program through fiscal year 1957 financed with general investigations funds.

The present total estimated project cost of $2,220,000 has been indexed to July 1956 price levels.

On a cost basis the fiscal year 1958 program will total $387,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Allocation of estimated total project cost

Reimbursable: Irrigation	$1,681,600
Nonreimbursable:	
Flood control	263,400
Fish and wildlife	244,300
Recreation	30,700
Subtotal, nonreimbursable	538,400
Total	2,220,000

Repayment of reimbursable costs

By irrigation water users	$1,681,600

Repayment costs per acre

Federal investment per acre: To be repaid from water users	$177
Annual water-user charges per acre:	
Construction	$4.90
Operation and maintenance	[1] .41
Total	5.31

[1] Operating cost represents only that increased cost to water users with project development.

Repayment contracts

The water users are organizing a contracting entity and a construction repayment contract will be executed prior to fiscal year 1958.

Physical data

Feature.—Little Wood Dam and Reservoir.
Type.—Earth fill.
Capacity.—30,000 acre-feet.
Height.—122 feet.
Length.—2,500 feet.

Acres to be served:

Supplemental supply.—9,550 acres.

Status

Program for fiscal year 1957 covers completion of definite plant report, land certification, execution of a repayment contract with the water users, and gathering of data sufficient to begin preparation of designs and specifications.

Work proposed, fiscal year 1958

Little Wood River Dam and Reservoir, $384,600.—Program will cover acquisition of rights-of-way, completion of designs and specifications, award of the contract for increasing the heights of the Little Wood River Dam, and modifications to existing outlets.

Contribution to civil service retirement fund $2,500.—Initial-year contribution contribution to civil service retirement fund.

Other expenditures and credits, $13,000.—Represents cost of providing laboratory facilities, field headquarters, stores, and equipment which will be distributed to project features in subsequent years.

AUTHORIZATION OF PROJECT

Chairman HAYDEN. When was this project authorized?

Mr. CROSTHWAIT. It was authorized by Public Law 993 of the 84th Congress, 2d session, August 6, 1952.

Chairman HAYDEN. Can you give a short description of the project?

Mr. BENNETT. The Little Wood River project, Senator, consists of reconstruction and enlargement of an existing reservoir. The works are already in existence. It is a supplemental supply project.

Senator DWORSHAK. Flood control is a big factor?

Mr. BENNETT. Yes, and fish and wildlife benefits.

Chairman HAYDEN. What is the total estimated cost of the project?

Mr. BENNETT. $2,220,000.

Chairman HAYDEN. What is the benefit-to-cost ratio?

Mr. BENNETT. 2.17 to 1.

Chairman HAYDEN. How much of the total cost is reimbursable, and from what source?

PORTION REIMBURSABLE AND REPAYMENT STATUS

Mr. BENNETT. Of the total cost reimbursable, $1,681,600 is reimbursable by the water users. The remaining portion of the cost is allocated to nonreimbursable functions of flood control, fish and wildlife, and recreation.

Chairman HAYDEN. What is the status of your repayment-contract negotiations?

Mr. DOMINY. There is an existing organization there that we have been negotiating with, and we have every reason to believe that there will be the necessary repayment arrangements very shortly.

ITEM FOR FISH AND WILDLIFE

Senator DWORSHAK. Is not the item for fish and wildlife of $244,300 quite high? What does that involve?

Mr. BENNETT. As I recall, Senator, that is an allocation of the joint cost resulting from, generally speaking, the proportion of benefits in the project.

Chairman HAYDEN. How long will it take to complete the project?

Mr. DOMINY. The schedule shows a construction period of 3 years, with 1958, $384,500; 1959, $1,098,000; and 1960, $625,800.

Chairman HAYDEN. When will it be completed?

Mr. DOMINY. It is scheduled over a 3-year construction period.

Chairman HAYDEN. Have you any further comment, Senator Dworshak?

Senator DWORSHAK. No.

IDAHO PROJECTS

Chairman HAYDEN. The House allowed the budget estimate to continue construction of three Idaho projects. They are: Michaud Flats project, $1,297,000; Minidoka project, north side pumping division, $1,465,000; and Palisades project, $1,500,000. I understand that these amounts will keep these projects on schedule. Am I correct?

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. I will place the detailed justifications in the record.

(The justifications referred to follow:)

MICHAUD FLATS PROJECT, IDAHO

Location

In southeastern Idaho in Power County. The project occupies a long narrow strip lying adjacent to the Snake River and American Falls Reservoir and extends 6 miles northeast and 6 miles southwest of the town of American Falls.

Authorization

Public Law 741, 83d Congress, 2d session, approved August 31, 1954 (68 Stat. 1026).

Description

The purpose of the project is to provide a full water supply to 11,240 acres of irrigable land. The water supply for 6,610 acres will be obtained from storage in American Falls and Palisade Reservoirs. Water for the remaining 4,630 acres will be considerably less than that which will be replaced by return flow from storage water. Project features will consist of the American Falls pumping plant, two main canals, deep wells (including pumps, motors, and electrical equipment), lateral distribution systems, and necessary drainage and operators' facilities. The plan also includes the purchase of 15 existing wells which will be integrated with 14 Government wells to be drilled.

Benefit-cost ratio

2.10 to 1.

Summarized financial data

Estimated total obligations	$4,475,313
Total obligations to June 30, 1956	474,746
Total obligations, fiscal year 1957	2,125,254
Total obligations, fiscal year 1958	1,297,000
Balance to complete	578,313

On a cost basis the fiscal year 1958 program will total $1,297,000, which is explained in the following narrative justification.

Changes in total project costs and obligations

	Costs	Obligations
Fiscal year 1957 congressional justification	$4,842,000	$4,703,700
Fiscal year 1958 congressional justification	4,652,700	4,475,313
Decrease	189,300	228,387

The total estimated project cost of the Michaud Flats project has been decreased from $4,842,000 to $4,652,700. The change is principally due to a reflection of bid prices actually experienced to date, more detail studies and estimates, and to a slight reduction in the sprinkler irrigation area.

Allocation of total project cost, $4,652,700

Reimbursable: Irrigation	$4,652,700
Total amount allocated	4,652,700

Repayment of reimbursable costs

By irrigation water users	$2,700,000
By power revenues from Palisades project	2,424,000
Total	[1] 5,124,000

[1] Includes assigned storage costs of $103,200 for American Falls Reservoir and $368,100 for Palisades Reservoir.

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$240.00
To be repaid from power revenues	216.00
Total	456.00
Annual water user charges:	
Construction	4.80
Operation and maintenance	3.77
Power cost	2.90
Total	11.47

Repayment contracts

A repayment contract has been executed with the Falls Irrigation District covering that part of the irrigation allocation payable by the water users. In accordance with the project authorizing act of August 31, 1954 (68 Stat. 1026) the contract provides for repayment over a 50-year period following a 10-year development period.

Physical data

Feature	Type	Capacity	Height	Length
				Miles
American Falls pumping plant.	Horizontal centrifugal.	126 cubic feet per second.	160-foot average lift	
Deep wells (29)	Vertical turbine	2 to 4 cubic feet per second.	Average pumping head of 219 feet.	
Main canal east	Open earth	88 cubic feet per second.		10.5
Main canal west	do	38 cubic feet per second.		11.0
Distribution system	Open earth and steel pipe.	Serves 11,240 acres		

Acres to be served

Full supply:	*Acres*
Sprinkler distribution from wells	2,927
Gravity distribution from wells	1,703
Sprinkler distribution by pumping from American Falls Reservoir	260
Gravity distribution by pumping from American Falls Reservoir	6,350
Total	11,240

Status

Construction began with award of the first well drilling contract on December 9, 1955. As of June 30, 1957, the project will be approximately 59 percent complete. Deep well drilling will be completed and work will be well underway on all other phases of the project construction, including the American Falls pumping plant, the main canals east and west, the open ditch lateral and pipeline systems and equipping of the subsurface water supply wells with pumps, motors, controls, etc.

Work proposed, fiscal year 1958

American Falls pumping plant, $196,237.—The program provides for contract earnings and associated expenses to complete the pumping plant and for testing these facilities during the spring of 1958 preparatory to operation and maintenance status in fiscal year 1959. Similar testing operations will be in process during the latter month of the fiscal year on all the other completing features of the project set out below.

Deep wells, $72,504.—Final payments will be made on pumps, motors, and electrical equipment and installation contracts will be completed. Rehabilitation of the purchased wells will continue into fiscal year 1959.

Main canal east, $446,126.—Construction work will be continued during the year.

Main canal west, $60,645.—Construction work will be completed.

Laterals, $391,660.—Construction on the open ditch laterals will be continued and the sprinkler pressure pipeline distribution systems will be completed.

Drains, $58,999.—Drains, of either surface or subsurface type, will be constructed to provide adequate drainage of project lands as the need arises.

Pumping substations, $4,700.—All necessary substations to serve the project pumping plants will be completed during the year.

General property, $45,530.—This program provides for the acquisition of the remaining equipment needs to serve the project as it is transferred to operation and maintenance status in fiscal year 1959.

Contribution to civil-service retirement fund, $12,800.—Initial year contribution to civil-service retirement fund.

Transitional development, $8,000.—For initiation of settler-assistance program involving post entry orientation.

Adjustments, —$201.—Represents minor adjustments in clearing accounts.

Minidoka Project, North Side Pumping Division, Idaho

Location

In south-central Idaho, in a crescent-shaped area bordering the northern boundary of the Minidoka Irrigation District in Minidoka County and in the southeast corner of Jerome County.

Authorization

Act of September 30, 1950 (64 Stat. 1083).

Description

The primary purpose of the project is to provide a full water supply for the irrigation of 80,750 acres of semiarid land in the south-central section of the State. More than 90 percent of the lands are on reclamation withdrawn public domain. The remaining 10 percent are private lands, the owners of which have requested to be included in the district. Of the 80,750 acres, 13,650 acres (unit A) are to be served by pumping from the Snake River, and 67,100 acres (unit B) are to be served by deep-well pumping. The adequacy of the ground water for unit B has been fully established by pump testing and by results of completed constructed works coupled with observation of ground-water levels. Project facilities include wells, well pumping units, small pumping substations, a main pumping plant on the Snake River, a short main canal and lateral distribution systems in both units A and B. The authorized plan included transmission and distribution lines and a central substation to serve the pumping plant. However, the transmission and distribution lines and substation have since been eliminated, as such facilities will be provided by a private utility.

Benefit-cost ratio

3.56 to 1.00.

Summarized financial data

Estimated total obligations	$10,598,809
Total obligations, to June 30, 1956	5,963,140
Total obligations, fiscal year 1957	2,792,669
Total obligations, fiscal year 1958	1,465,000
Balance to complete	378,000

On a cost basis the fiscal year 1958 program will total $1,465,731. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
Fiscal year 1957 congressional justification	$10,514,000	$10,514,000
Fiscal year 1958 congressional justification	10,626,000	10,598,809
Increase	112,000	84,809

The total estimated project cost of the north side pumping division, Minidoka project has been increased from $10,514,000 to $10,626,000. This increase is due to a requirement for additional drainage facilities. Also several internal changes between program items have been made to reflect bid prices and actual contract conditions as well as more detailed estimate data. The net increase in total obligations is principally due to the additional drainage requirements offset by a reduction to reflect the net nonappropriation transfers, salvage of service facilities, and transfer of selected stores to water users.

Allocation of total project cost

Reimbursable: Irrigation	$10,626,000
Total reimbursable	10,626,000
Total amount allocated	10,626,000

Repayment of reimbursable amount

Irrigation allocation:	
By irrigation water users	$10,964,424
Credits for water rental, grazing fees, etc	430,576
Total reimbursable amount	[1] 11,395,000

[1] Includes $698,000 for allocation of storage in Palisades and $71,000 for allocation of storage in American Falls Reservoir.

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$136.00
Other sources (credits)	5.00
Total	141.00
Annual water user charges:	
Construction	2.72
Operation and maintenance	8.81
Total	11.53

Repayment contracts

The cost of the irrigation facilities of the north side pumping division will be repaid by water users. The north side pumping division consists primarily of public lands. Formation of the irrigation district will be started in the fall of 1958 with the completion of the district and election of directors in the fall of 1959 at which time negotiation on the repayment contract will be started. At the present time repayment is pledged in contracts with each entryman or owner.

Physical data

Feature	Type	Capacity	Length or number
Unit A:			
Pumping plant	Steel superstructure, 5 units.	240 cubic feet per second; total dynamic head 168 feet.	
Main canal	Earth-unlined	240 cubic feet per second	4.4 miles.
Laterals	Earth	2.5 to 75 cubic feet per second	4.5 miles.
Unit B:			
Deep wells, 8 groups (total 192 wells).	Average pumping head, 204 feet.	Estimated average discharge, 5.6 cubic feet per second.	192 wells.
Laterals	Earth	1.5 to 10.5 cubic feet per second	120 miles.

Acres to be served

	Acres
Full supply	80,750
Total	80,750

Status

Construction began in 1952. As of June 30, 1957, the project will be approximately 83 percent complete. Group 4 wells and the unit A irrigation system, except for minor drainage, will be completed. Drilling of wells for groups 5, 6, and 7 will be completed and the pumping equipment for these wells will have been ordered. Lateral construction for group 7 will continue. Contracts for the lateral construction and pumping substations for part of groups 5 and 6 will be awarded. Drainage work will be continued as required. Four residences for operating personnel and a warehouse will be constructed during fiscal year 1957.

Work proposed, fiscal year 1958

Unit A

Drains, $20,000.—To continue necessary drainage work.

Unit B

Deep wells, $569,328.—The program prvides for completing the purchase of pumps, motors and control equipment for well groups 5, 6, and 7. The installation of 61 well units and controls will be completed. Installation contract for the remaining 16 well units will be awarded in fiscal year 1959. Contract for drilling and purchase of equipment for the 13 wells in group 8 will be awarded.

Laterals, $315,017.—The lateral system for group 7 wells and a part of laterals for groups 5 and 6 wells will be completed. Contract for construction of the remaining groups 5 and 6 laterals and group 8 laterals will be awarded.

Drains, $81,336.—Work will continue on the drilling of drainage wells and construction of drainage channels and structures as required to handle drainage problems as they develop.

Pumping substations, $333,981.—Purchase of substation equipment for groups 5, 6, and 7 wells will be completed. The program provides for the construction of pumping substations for 61 well units. The remaining 16 substations will be constructed in fiscal year 1959.

General property, $122,069.—Three houses will be constructed, two will be ditchrider residences and one will be a watermaster's residence. Operation equipment will be acquired and a warehouse building and garage will be constructed at Paul Yards, a watermaster location.

Contribution to civil-service retirement fund, $41,800.—Initial year contribution to civil-service retirement fund.

Transitional development, $12,000.—These funds will provide for post-entry orientation settler assistance.

Adjustments, —$2,800.—Represents deductions for quarters and minor cost adjustments.

Other expenditures and credits, —$731.—Expenditure for service facilities in prior years being charged to permanent project features in fiscal year 1958.

Palisades Project, Idaho

Location

Palisades Dam is located at Calamity Point on the South Fork of the Snake River, about 8 miles west of the Idaho-Wyoming boundary, 57 miles east and upstream from Idaho Falls, Idaho.

Authorization

The project was initially authorized in 1941 as the Palisades Dam and Reservoir project by presentation to the President and Congress of a report and findings by the Secretary of the Interior on December 9, 1941, under the provisions of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187) subsequently reauthorized on a larger and broader basis under the act of September 30, 1950 (64 Stat. 1083).

Description

The basic plan for Palisades project calls for construction of an earth-fill dam 263 feet high and 2,100 feet long at the crest, a tunnel spillway, 2 outlet tunnels, with reservoir capacity of 1,401,600 acre-feet, a powerplant with installed

nameplate rating of 114,000 kilowatts, and transmission lines necessary for interconnection and use by other projects as authorized.

The Palisades Reservoir will provide supplemental irrigation water for 650,000 acres of land located in the Upper Snake River Valley. The project plan and cost estimate do not include construction of any irrigation distribution works. However, development of 48,190 acres of new land areas are dependent upon Palisades Reservoir storage becoming available. The 114,000-kilowatt powerplant will provide hydroelectric energy to serve irrigation pumping, municipal, and rural cooperative loads as well as serving as fuel replacement energy. Prior to constuction of American Falls powerplant, Palisades will furnish power for the north side pumping division of the Minidoka project and for Michaud Flats project. It will also supplement the proposed American Falls powerplant when needed to supply power for the Minidoka north side and Michaud Flats developments. Direct flood protection will be provided for land on the Snake River Plain above American Falls Reservoir.

In order to provide power for defense purposes in emergencies, irrigators have agreed to a 5-year plan giving priority to the use of Palisades water for power production.

Benefit-cost ratio

2.33 to 1.

Summarized financial data

Estimated total obligations	$61,525,000
Total obligations to June 30, 1956	53,689,620
Total obligations, fiscal year 1957	6,118,331
Total obligations, fiscal year 1958	1,500,000
Balance to complete	217,049

On a cost basis the fiscal year 1958 program will total $1,935,044. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of cost to obligations.

Change in total project cost and obligations

	Costs	Obligations
1957 congressional justifications	$63,000,000	$62,640,000
1958 congressional justifications	62,000,000	61,525,000
Decrease	1,000,000	1,115,000

The total estimated cost of the Palisades project has been decreased from $63 million to $62 million. The decrease is principally the result of refining the estimate of remaining work to be done and the reflection of completed work at favorable prices.

Allocation of estimated total project cost

Allocation of total amount assigned to this project:	
Reimbursable:	
Irrigation	$15,075,000
Power:	
Commercial (59 percent)	16,962,000
Irrigation (41 percent)	11,787,000
Subtotal, reimbursable	43,824,000
Nonreimbursable:	
Flood control	17,528,000
Fish and wildlife and recreation	648,000
Subtotal, nonreimbursable	18,176,000
Total amount allocated	62,000,000

Repayment of reimbursable amount

Irrigation allocation:	
By irrigation water users	$8,233,000
Financial assistance from power	5,775,000
Power allocation:	
Power revenues	28,749,000
Total reimbursable amount	[1] 42,757,000

[1] Does not include $368,100 assigned to Michaud Flats project and $698,000 assigned to north side pumping division, Minidoka project, for allocation of storage in Palisades reservoir.

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$13
To be repaid from power revenues	8
To be repaid from other sources	-----
Total	21
Annual water-user charges	[1] 36

[1] Does not include operating costs for existing project works by the several contracting entities.

Repayment contracts

Contracts for 712,000 acre-feet of irrigation capacity which involve provisions for water savings have been entered into with water users organizations. Agreement has also been reached on the basic principles involving the remaining capacity.

Contracts for wheeling services and for the sale of secondary and dump power to the Utah Power & Light Co. and the Idaho Power Co. have been negotiated. Preference customers hold future delivery contracts for all Palisades firm power; these agreements were converted to firm contracts on January 1, 1957.

Physical data

Feature	Type	Capacity	Height	Length
Palisades Dam and Reservoir	Earth and rock	1,401,600	263 feet	2,100 feet.
Palisades powerplant (4 units)	Hydro	114,000-kilowatt		
Transmission system (2 lines)	H-frame, wood pole	115-kilovolt		107 miles.

Acres to be served

	Acres
Full supply	[1] None
Supplemental supply	650,000

[1] Development of 48,190 acres of new land areas are dependent upon Palisades storage becoming available. Development is being accomplished under other authorizations.

Status

Preconstruction surveys were started in 1945 and the first two contracts were awarded in 1949. Full-scale construction activities started in December 1951. On June 30, 1957, the project will be approximately 96 percent complete.

Work proposed, fiscal year 1958

Palisades Dam, $451,574.—The program provides for completion of the dam. The embankment will be virtually completed in fiscal year 1957 and only minor cleanup work will remain to be done in fiscal year 1958.

Relocation of existing property, $90,991.—The program provides for completion of the highway relocation work. Placing a seal coat on the highway surfacing will be the only remaining work to be accomplished in fiscal year 1958.

Palisades powerplant, $1,127,536.—The program provides for completion of the powerplant. Installation of the fourth and final generating unit will be completed.

Palisades switchyard, $126,291.—The program provides for completion of the switchyard.

General property, $94,521.—The program provides for completion of the community facilities. This property class has been transferred to plant in service, however, it is anticipated that there will be some final cost transfers and adjustments when the project goes into a complete operation and maintenance status.

Fish and wildlife and recreational facilities, $55,000.—The program provides for the final payment to the Fish and Wildlife Service for construction of a fish hatchery.

Contributions to Civil Service Retirement fund, $17,100.—Initial year contribution to civil service retirement fund.

Adjustments, —$27,969.—Payroll deduction for housing furnished Bureau employees who reside in Government camp.

Other expenditures and credits, —$435,044.—Represents cost of service facilities and stores accrued in prior years which will be distributed to permanent property in the budget year.

EXPECTED COMPLETION DATE

Senator DWORSHAK. When will the power facilities at Palisades be completed?

Mr. DEXHEIMER. The Palisades Dam and power facilities are expected to be completed during fiscal 1958, Senator.

Chairman HAYDEN. It is 12 o'clock. Will it be agreeable to you gentlemen to return at 2:30?

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. The committee will stand in recess until 2:30 p. m.

(Thereupon, at 12 o'clock noon, the committee recessed to reconvene at 2:30 p. m. of the same day, June 17, 1957.)

AFTERNOON SESSION, 2:30 P. M. (MONDAY, JUNE 17, 1957)

CONSTRUCTION AND REHABILITATION

STATEMENTS OF W. A. DEXHEIMER, COMMISSIONER; S. W. CROSTHWAIT, ASSISTANT COMMISSIONER; A. R. GOLZÉ, CHIEF, DIVISION OF PROGRAM COORDINATION AND FINANCE; N. B. BENNETT, JR., CHIEF, DIVISION OF PROJECT DEVELOPMENT; F. E. DOMINY, CHIEF, DIVISION OF IRRIGATION; C. C. BAKER, ASSISTANT CHIEF, DIVISION OF POWER; AND SIDNEY D. LARSON, DIRECTOR, DIVISION OF BUDGET AND FINANCE, DEPARTMENT OF THE INTERIOR—Resumed

JUSTIFICATIONS

Chairman HAYDEN. The committee will be in order.

The House committee recommended the allowance of the budget estimates for the following projects: Fort Peck project, Montana-North Dakota, $645,000; Middle Rio Grande project, New Mexico, $3,758,000; Washita Basin project, Oklahoma, $3,500,000. If there are no questions from the members of the committee or comments from the officials of the Bureau, we will include the justification in the record and proceed with the next project on the list.

(The justifications referred to follow:)

Fort Peck Project, Montana-North Dakota

Location

In the Yellowstone, Missouri, and Milk River areas of north central and northeastern Montana and northwestern North Dakota.

Authorization

Fort Peck Act of May 18, 1938 (52 Stat. 403).

Description

Bureau of Reclamation facilities consist of a transmission system to market power generated by Corps of Engineers' powerplants of 165,000-kilowatt capacity at the Fort Peck Dam in Montana.

Facilities in operation or planned include 1,070 miles of transmission lines ranging from 34.5-kilovolt to 230-kilovolt capacity, and 33 substantions with a total combined capacity of 387,700-kilovolt-amperes and a number of smaller transmission lines and substations to serve possible future REA cooperative loads and future irrigation pumping loads. The Fort Peck system also has facilities to interconnect with the Missouri River Basin project power system near Williston, N. Dak., and at Great Falls, Mont., the latter through a wheeling agreement with the Montana Power Co. The Fort Peck system also interconnects with the Montana-Dakota Utilities Co. on the east.

Benefit/Cost ratio

1 to 1.

Summarized financial data

Estimated total obligations	$21,692,000
Total obligations to June 30, 1956	10,464,047
Total obligations, fiscal year 1957	122,748
Total obligations, fiscal year 1958	645,000
Balance to complete	10,460,205

On a cost basis the fiscal year 1958 program will total $654,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$24,606,000	$22,681,339
1958 congressional justification	23,876,607	21,692,000
Decrease	729,393	989,339

The total project cost of the Fort Peck project has been decreased from $24,606,000 to $23,876,607. The decrease is principally due to a reduction in cost of the Fort Peck-Dawson County 230-kilovolt transmission line based on changes in steel tower designs. Also, the elimination of one 230-kilovolt line terminal facility at the Dawson County substation accounted for part of the decrease. These decreases are partially offset by an increase in the estimate due to the transfer of the Tiber Dam transmission line and substation from the lower Marias unit, Missouri River Basin project, to the Fort Peck project, including investigation of abandoned works as project costs and the addition of contributions to civil-service retirement fund.

Allocation of estimated total project cost

Reimbursable:	
Power	$23,876,607
Total	23,876,607

Repayment of reimbursable costs

By power revenues	$23,876,607

Repayment contracts

The allocation of costs to powerplant and irrigation electric plant is based on interim allocations of cost to power development approved by the Federal Power Commission, dated April 20, 1943. Under this interim allocation, the Commission determined that the entire cost of the powerplant should be allocated to power development, and reserved the right to allocate the cost of joint facilities between power development and other facilities. The total power cost of the project has been divided between interest-free and interest-bearing investment on a basis of the kilowatt-peak demand usage for irrigation pumping and commercial loads in the Missouri Basin area. The total power costs of the project will be repaid from power-sales revenue.

Physical data

Feature	Type	Capacity	Length
	Kilovolts	*Kilovolts*	*Miles*
Transmission lines	34.5		52.2
	50.0		14.2
	57.0		11.3
	69.0		18.2
	115.0		549.2
	161.0		292.0
	230.0		130.0
Substations (33) (total)		387,700	

Status

As of June 30, 1957, the project will be approximately 53 percent complete. Construction of the Dawson-Glendive transmission line, Glendive substation additions, and Fort Peck-Whately transmission line will be completed. Work will be underway on installations of metering and communication equipment and preliminary investigation studies on the Fort Peck-Dawson County 230-kilovolt transmission line will be completed.

Work proposed, fiscal year 1958

Fort Peck-Dawson County 230-kilovolt transmission line and substation, $625,000.—The program provides for the collection of design data, completion of designs, award of contracts and acquisition of rights-of-way during the fiscal year. Construction will begin toward the end of the fiscal year on the 130-mile transmission line to terminate at the Dawson County substation. The Missouri River Basin project's 230-kilovolt Dawson County-to-Bismarck transmission line will originate at Dawson County substation and provide the transmission tie with the Missouri River Basin project's transmission system at Bismarck, N. Dak.

Metering equipment and other tangible property, $20,000.—Additional metering equipment to accommodate new customer connections and additional delivery points to existing customers will be installed at various points on the system. Miscellaneous additional property installations relating to customer service is also provided for.

Contribution to civil service retirement fund, $8,700.—Initial contribution to civil-service retirement fund.

Adjustments, $300.—Anticipated nonappropriation transfer of stores.

Other expenditures and credits, —$9,000.—Represents costs accrued in prior years for stores and other investments which are being transferred to permanent property in the budget year.

Middle Rio Grande Project, New Mexico

Location

Middle Rio Grande Valley in north-central New Mexico, extending from the Colorado-New Mexico boundary south to the backwaters of Elephant Butte Reservoir and including rectification of the Rio Grande in the vicinity of Truth or Consequences, N. Mex. (formerly Hot Springs, N. Mex.).

Authorization

Approved by the Congress in the Flood Control Act of 1948 (62 Stat. 1171, 1179), and completion of the plan approved in the Flood Control Act of 1950 (64 Stat. 170, 176).

Description

The project plan, developed jointly by the Bureau of Reclamation and the Corps of Engineers, provides for the construction of certain river-control works, rehabilitation of existing works, and further development of lands within the Middle Rio Grande Conservancy District. The Bureau of Reclamation will undertake the rehabilitation and extension of existing irrigation and drainage systems, together with channel rectification, eradication of water-hungry vegetation, and improvement of the main channel throughout the Espanola and Middle Valleys and the reach below Elephant Butte Reservoir to the upper end of Caballo Reservoir.

Works of the Middle Rio Grande Conservancy District comprise the irrigation part of the project. These works include El Vado Dam and Reservoir; diversion dams and headworks; a canal, lateral, and drainage system. The conservancy district includes 121,680 acres of water-right lands situated in the counties of Sandoval, Bernalillo, Valencia, and Socorro.

Benefit-to-cost ratio

2.8 to 1.

Summarized financial data

Estimated total obligations	$28,449,236
Total obligations to June 30, 1956	15,909,568
Total obligations, fiscal year 1957	3,881,249
Total obligations, fiscal year 1958	3,758,000
Balance to complete	4,900,419

On a cost basis the fiscal year 1958 program will total $3,773,000. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total construction costs and obligations

	Costs	Obligations
1957 congressional justification	$30,346,243	$29,536,803
1958 congressional justification	30,346,243	28,449,236
Decrease	0	1,087,567

The total estimated project cost of the Middle Rio Grande project remains the same. The estimated obligations have been reduced mainly because the amount appropriated for the acquisition of district bonds was less than the amount estimated. A portion of the amount required for the bond acquisition was furnished by the district.

Allocation of total estimated project cost

Reimbursable irrigation	$16,880,243
Nonreimbursable:	
Flood control	11,159,000
Indian land	2,307,000
Subtotal, nonreimbursable	13,466,000
Total	30,346,243

Repayment of reimbursable costs

By irrigation water users	$16,880,243

Repayment costs per acre

Federal investment per acre: To be repaid from water users	[1] $169
Annual water user charges:	
Distribution systems:	
Construction	4.22
Operation and maintenance	7.83
Total	[2] 12.05

[1] For 100,016 acres of non-Indian lands only.
[2] Construction and operation and maintenance cost to be paid by acreage assessment on class A lands and ad valorem tax on class B lands.

Repayment contract

A repayment contract was executed with the Middle Rio Grande Conservancy District on September 24, 1951, whereby the district agrees to repay a maximum of $18 million in 40 years after completion of construction. This amount includes the acquisition of district bonds. The present estimated cost to the water users is $16,880,243 of which $10,440,000 represents construction costs and $6,440,243 represents acquisition costs of district bonds. Of the total cost of district-bond acquisition, $5,300,000 has been allotted and $1,140,243 was contributed by the district from its guarantee fund. The remainder of the costs allocated to irrigation, $2,307,000, is for service to Indian lands and is nonreimbursable.

Physical data

Feature	Type	Capacity	Height	Length
El Vado Dam (rehabilitation only).	Randon-fill with steel membrane on upstream face.	194,500 acre-feet	175 feet	1,300 feet.
Diversion dams (rehabilitation only):				
Angostura	Concrete, wall weir		4½ feet	800 feet.
Cochiti	Concrete, overflow weir.		8 feet	335 feet.
Isleta	Reinforced concrete gated structure.		5 feet	674 feet.
San Acacia	do		7.5 feet	700 feet.
Canals	Open, unlined			180 miles.
Distribution system	Open lateral	121,680 acres		587 miles.
Drainage system	Open and concrete pipe.	Serves 121,680 acres		399 miles.
Channelization (Rio Grande).	Open channel	2,000–5,000 cubic feet per second.	Cleared width of floodway, 400 to 1,400 feet.	127 miles.

Acres to be served

	Acres
Full supply	121,680

Status

Construction began with channel rectification emergency work to reduce nonbeneficial use of water on October 20, 1951. By June 30, 1955, all work on the emergency channel in the San Marcial area had been completed. Construction was initiated on rehabilitation of district irrigation works on November 30, 1953. During fiscal year 1957, construction will be underway on rehabilitation of El Vado Dam, San Acacia Dam, canal system, lateral system and drainage system, and on chanelization in the Espanola Valley and Socorro area. Preconstruction work will be active in connection with Angostura diversion works, Cochiti diversion dam and channelization in the San Marcial area. Project investigations in connection with remaining features will continue. By June 30, 1957, 62 percent of the irrigation rehabilitation and of the channel rectification will be completed. Excluding acquisition of district bonds from the total project cost, the overall completion of construction work by June 30, 1957 will be 62 percent.

Work proposed, fiscal year 1958

El Vado Dam, $5,000.—A minor contract will be awarded for painting the invert of the penstock completing scheduled work on this feature.

Diversion works, $214,179.—A contract will be awarded for modification of the existing diversion dam and headworks on the Angostura diversion works to decrease the amount of sediment entering the Albuquerque main canal. Work on the Angostura diversion works will be completed during the year. A contract will also be awarded for repair of and motorizing the sluice gates and for painting and repairing the miscellaneous metal work on the Cochiti diversion dam. Work on this dam will also be completed during the year.

Canals, $324,000.—Acquisition of rights-of-way will continue, and contracts will be awarded for the Atrisco feeder canal-north reach extension, and for the maintenance road along the Atrisco feeder canal. Collection of design data will continue for construction contracts scheduled in fiscal year 1959.

Laterals, $1,470,281.—Acquisition of rights-of-way will continue and construction contracts will be awarded and progress payments made on rehabilitation of five lateral units in the Belen area. Collection of design data will continue for construction contracts scheduled in fiscal year 1959.

Channelization, $1,701,540.—Work on the final contract in the Espanola Valley will be completed. Construction contracts will be awarded for the final two contracts in the Socorro area. A construction contract will be awarded to construct a low-flow channel for approximately 3 miles through the sediment in the San Marcial Lake area. This contract will be completed within the fiscal year. Investigation work will continue to determine a final plan for channelization in the Albuquerque, Cochiti, and Belen areas which are the only remaining reaches of the river.

Contribution to civil-service retirement fund, $57,500.—Initial year contribution to civil-service retirement fund.

Adjustments, $500.—Minor cost adjustment representing value of material salvaged and credited to project.

Other expenditures and credits,—$15,000.—Represents expenditures for service facilities made in prior years being charged to permanent project features in fiscal year 1958.

Washita Basin Project, Oklahoma

Location

In southwestern Oklahoma in Caddo, Grady, Custer, and Beckham Counties.

Authorization

Act of February 25, 1956 (70 Stat. 28).

Description

The principal purposes of the project are to store, regulate, and furnish water for municipal, domestic, and industrial use, and for the irrigation of 25,700 acres of land; to control floods by regulating the flow of the Washita River; to provide for the preservation and propagation of fish and wildlife; and to enhance recreational opportunities. The project is divided into the Fort Cobb Dam on Pond (Cobb) Creek, which will form a reservoir with a capacity of 142,000 acre-feet; irrigation facilities consisting of diversion works on the Washita River, 26 miles of canals, and laterals and drains to serve 9,000 acres of land lying on the south side of the Washita River; and the Anadarko aqueduct from the Fort Cobb Reservoir to furnish municipal and industrial water amounting to 7,215 acre-feet annually to various communities in the area. Facilities of the Foss division include the earth-fill Foss Dam on the Washita River which will form a reservoir with a capacity of 302,000 acre-feet; irrigation facilities consisting of 45.9 miles of canals along with laterals and drains to serve 9,440 acres of land lying along the Washita River from the Foss Dam to the city of Clinton and 18.6 miles of canals along with laterals and drains to serve 7,260 acres of land lying on the north side of the Washita River downstream from the Anadarko diversion works, the 52 miles Clinton-Cordell-Hobart aqueduct along with the Foss and Relift pumping plants to furnish municipal and industrial water, in the amount of 6,326 acre-feet annually, to the cities of Clinton, Cordell, Hobart, and various communities in the area. Necessary general property installations and equipment will be provided in both divisions of the project for adequate operation and maintenance facilities. Fish and wildlife and recreational facilities will be provided at both of the reservoirs.

The above description represents the plan as presently contemplated. However, changing stream-flow conditions and municipal demands subsequent to the development of the above plan will require modification of some of the features and the allocation of water. The modified plan and the determination of benefits will be set forth in a definite plan report prior to start of construction.

Benefit-to-cost ratio

1.4 to 1. (To be recalculated in D. P. R.)

Summarized financial data

Estimated total obligations	$40,301,031
Total obligations to June 30, 1956	(1)
Total obligations, fiscal year 1957	500,000
Total obligations, fiscal year 1958	3,500,000
Balance to complete	36,301,031

[1] All preconstruction expenditures from general investigations funds.

On a cost basis the fiscal year 1958 program will total $3,410,000. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$40,600,000	$40,273,214
1958 congressional justification	40,600,000	40,301,031
Increase		27,817

The change in obligations reflects actual costs for advance planning from general investigations funds in fiscal year 1956, and anticipated salvage of $40,000 at the end of construction.

Status

As of June 30, 1956, feasibility investigations and a report setting forth a plan of development for the Washita River Basin has been completed. In this report the Fort Cobb and Foss divisions were recommended for authorization. The Commissioner's proposed report was approved by the Secretary of the Interior in February 1952. During the latter part of fiscal year 1956, additional hydrology studies were performed to bring the records in connection with the proposed Fort Cobb Reservoir up to date and investigations were made of the Fort Cobb Dam site to determine the design requirements for the dam. During fiscal year 1957, the initial volumes of the definite plan report, which will set forth the general plan of development for Fort Cobb and Foss Dams will be completed, and repayment contracts for Fort Cobb division will be executed.

Tentative allocation of estimated total project cost

Reimbursable:	
Irrigation	11,382,000
Municipal and industrial water	12,413,000
Subtotal, reimbursable	23,795,000
Nonreimbursable:	
Flood control	15,417,000
Fish and wildlife	839,000
Recreation	549,000
Subtotal, nonreimbursable	16,805,000
Total	40,600,000

Anticipated repayment of reimbursable costs

By irrigation water users	$3,302,000
By municipal and industrial water users	20,493,000
Total	23,795,000

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$128
To be repaid from municipal and industrial water users	315
Total	443
Annual water user charges:	
Irrigation construction (average)	$2.55
Operation and maintenance	4.25
Total irrigation	6.80

Repayment contracts

Present plans provide that repayment contracts will be negotiated with two master conservancy districts for repayment of all reimbursable costs. Execution of these repayment contracts are scheduled for March and July 1957. The proposed contract or contracts covering the reimbursable costs of municipal and industrial water supply will provide for the repayment of the costs plus the appropriate interest as certified by the Secretary of the Treasury, within a period of 50 years. It is contemplated that such contracts will provide that annual costs will be graduated in accordance with estimates of total water deliveries to the municipalities. Costs allocable to irrigation beyond the payment capacity of the irrigation water users within the prescribed repayment period will be met by an extension of payments by the municipal and industrial water supply users.

Physical data

Feature	Type	Capacity	Height	Length
			Feet	
Fort Cobb Dam and Reservoir.	Earth fill	142,000 acre-feet	101	9,800 feet.
Fort Cobb diversion irrigation facilities.	Diversion dam, canal, laterals and drains.	400 to 250 cubic feet per second to serve 9,000 acres.		
Anadarko aqueduct (municipal water).	Reinforced concrete pipe.	15 to 11 cubic feet per second.		32.8 miles.
Foss Dam and Reservoir	Earth fill	302,000 acre-feet	110	13,000 feet.
Foss division irrigation facilities.	Canals, laterals, and drains.	140 to 81.3 cubic feet per second to serve 16,700 acres.		
Clinton-Cordell-Hobart aqueduct (municipal water).	Steel and reinforced concrete pipe.	6.4 cubic feet per second		52.0 miles.

Acres to be served

	Acres
Full supply:	
Fort Cobb division	9,000
Foss division	16,700
Supplemental supply	0
Total	25,700

Work proposed, fiscal year 1958

Fort Cobb Dam and Reservoir, $2,346,500.—A construction contract will be awarded for construction of Fort Cobb Dam. Construction work will begin during the year and will be approximately one-fourth complete at the end of the fiscal year. Rights-of-way will be acquired and specifications will be issued for reservoir clearing.

Irrigation facilities, $20,000.—Collection of design data will be initiated during the year with construction scheduled for fiscal year 1959.

Municipal and industrial water facilities, $187,000.—Collection of design data will be completed and a construction contract will be awarded the latter part of the year.

Foss Dam and Reservoir, $800,000.—Repayment contracts for Foss division will be executed. The prime construction contract will be awarded and construction will begin during the year. Dam site rights-of-way will be acquired.

Contribution to civil-service retirement fund, $56,500.—Initial year contributions to civil-service retirement fund.

Other expenditures and credits, $90,000.—Represents the increase in service facilities due primarily to the construction of field office and laboratory buildings at the Fort Cobb and Foss Dam sites. These costs will be distributed to project features in subsequent years.

CROOKED RIVER PROJECT, OREGON

Chairman HAYDEN. The House committee recommended the allowanc in the budget estimate of $850,000 for the initiation and construction of the Crooked River project, Oregon. The justification will be included in the record.

(The justification referred to follows:)

Location:

Crook County, central Oregon.

Authorization:

Project authorized by act of August 6, 1956 (70 Stat. 1058). Primary purpose of project is to furnish full water supply to 9,990 acres of new land and supplemental water supply to 10,220 acres now inadequately irrigated. In addition, 51,200 acre-feet of water annually would be available for future use on other acreage as yet not selected in the Deschutes River Basin.

Description:

The project works include: The Prineville Dam and Reservoir on the Crooked River with a usable capacity of 155,000 acre-feet; a small diversion dam 4 miles above the city of Prineville, a diversion canal from this point to and across Ochoco Creek to a pumping plant at the foot of Barnes Butte; a distribution canal extending westward from the discharge line of the pumping plant to and across McKay Creek, where a second pumping plant would relift part of the water for distribution to lands lying west of this point. Drainage works have been included to prevent damage to the bottom land areas.

Benefit-to-cost ratio:

2.15 to 1.00.

Sumarized financial data

Estimated total obligations	$6,287,000
Total obligations to June 30, 1956	(1)
Total obligations, fiscal year 1957	(1)
Total obligations, fiscal year 1958	850,000
Balance to complete	5,437,000

[1] Financed with general investigation funds.

On a cost basis the fiscal year 1958 program will total $750,000. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of cost to obligations.

Change in total project costs and obligations:

Total estimated project cost has been adjusted to January 1956 price levels, resulting in an increase of $264,000 over the estimate at the time of authorization.

Allocation of total project cost

Reimbursable: Irrigation	$5,894,000
Nonreimbursable:	
Flood control	663,000
Fish and wildlife	30,000
Recreation	16,000
Subtotal, nonreimbursable	709,000
Total	6,603,000

Repayment of reimbursable amount

By irrigation water users	$2,301,000
Power revenues	[1] 3,852,000
Total reimbursable amount	[1] 6,153,000

[1] Includes allocation of $259,000 from Cove powerplant for pumping plant power generating capacity.

Repayment costs per acre

Federal investment per acre: [1]	
To be repaid from water users	$93.00
To be repaid from power revenues	115.00
Total	208.00
Annual water user charges: [2]	
Construction	2.73
Operation and maintenance	2.32
Total	5.05

[1] Project costs of $1,938,000 associated with the unassigned space in Prineville Reservoir have not been included in the pre acre analysis. When the unassigned space is committed to a specific use the per acre cost will be revised to reflect the inclusion of additional acreage.

[2] All operating costs for the project have been assigned to project lands. When additional lands are included in the project area these lands will assume an equitable share of the operating costs for the reservoir only.

Repayment contracts

The project authorizing act permits a period of 50 years (exclusive of any permissible development period) for water user repayment of the portion of the construction cost within the ability of the water users to pay. Costs beyond the ability of the water users to pay are to be returned from surplus revenues derived from sale of power from the Dalles project, Oregon. The repayment contract is scheduled to be executed prior to fiscal year 1958 with the existing Ochoco Irrigation District for a portion of the cost of Prineville Reservoir and related delivery and drainage works serving Crooked River project lands. Repayment of the Prineville Reservoir construction cost associated with the 51,200 acre-feet of storage water in excess of the needs of the Crooked River project lands will be covered in contracts with other lands in the Deschutes River Basin.

Physical data

Feature	Type	Capacity	Height	Length
Prineville Dam and Reservoir	Earth and rockfill	[1] 155,000	[2] 200	[2] 700
Diversion dam	Concrete weir type			[2] 200
Canals:				
Diversion canal	Concrete and earth	[3] 97.3		[4] 6.3
Distribution canals				[4] 14.8
Ochoco relift pumping plant	3 pumps, 200 horsepower each	[3] 37.2		
Barnes Butte pumping plant	3 pumps, 300 horsepower each	[3] 92.4		
Lateral system:				
Gravity division		[5] 13,390		
Pump division		[5] 6,820		
Drains	Open			[4] 20
Acres to be served:				
Full supply		[5] 9,990		
Supplemental supply		[5] 10,220		
Total		[5] 20,210		

[1] Acre-feet.
[2] Feet.
[3] Cubic feet per second.
[4] Miles.
[5] Acres.

Status

Construction of Prineville Dam is scheduled to begin in fiscal year 1958. Work in fiscal year 1957, to be financed with "General investigations" funds, will cover land classification, additional field work on the pumping plants, gathering of detailed data on Prineville Dam for design purposes, and execution of a repayment contract with the Ochoco Irrigation District.

Work proposed, fiscal year 1958

Prineville Dam, $582,700: Final design data will be completed and the prime contract for construction of the dam will be awarded. Rights-of-way will be acquired and a contract for relocation of an existing road will be negotiated with Crook County. Balance of the work to be done in fiscal year 1958 and totaling $182,000 will cover cost of final investigations of the following features. A construction field office will be established.

Diversion dam, $5,000.
Ochoco relift pumping plant, $20,000.
Barnes Butte pumping plant, $35,000.
Diversion canal, $40,000.
Distribution canal, $10,000.
Drains, $50,000.
Distribution power lines and substations, $1,000.
General property, $1,000.

Contribution to civil service retirement fund, $5,300: Initial year contribution to civil service retirement fund.

Other expenditures and credits, $100,000: Represents expenditure for field headquarters laboratory facilities, stores, and equipment which will be charged to permanent project features in future years.

AUTHORIZATION OF PROJECT

Chairman HAYDEN. This is a new start. When was this project authorized?

Mr. BENNETT. The project was authorized the last session of Congress, Mr. Chairman.

Chairman HAYDEN. Give the committee a short description of the project.

Mr. BENNETT. Yes, sir. The Crooked River project surrounds and is adjacent to the town of Prineville, in Crook County, Oreg. It is designed to provide irrigation to almost 10,000 acres of dry land and 10,220 acres of land will receive a supplemental water supply. The

works will consist of the Prineville Dam and Reservoir on Crooked River, a small diversion dam above the little town of Prineville, a diversion canal, pumping plant, and distribution works, with a relift pumping plant and the necessary drainage works.

ESTIMATED COST

Chairman HAYDEN. What is the estimated cost of the project?

Mr. BENNETT. $6,603,000.

Chairman HAYDEN. What is the benefit-cost ratio?

Mr. BENNETT. 2.15 to 1

Chairman HAYDEN. How much of the total cost is reimbursable, and from what source?

Mr. BENNETT. The reimbursable costs are $5,894,000. The authorizing act provides that the irrigators will pay up to their ability to pay, and that the remaining part of the cost will be picked up by power revenues from The Dalles project.

Chairman HAYDEN. How do you think that will work out?

Mr. BENNETT. It will work very well, sir. The water users will pay about $93 per acre over the period. Power revenues will pay about $115. It will take something in the neighborhood, if I remember, of about 100 days of spinning the wheels of The Dalles to get enough revenues to get that extra cost.

Chairman HAYDEN. To what functions are the reimbursable costs allocated?

Mr. CROSTHWAIT. All to irrigation.

Chairman HAYDEN. What status is the repayment contract?

Mr. DOMINY. We don't have the contract actually executed, Mr. Chairman, but we do have an existing organization with which to deal. We have almost a unanimous, if not unanimous, sentiment in favor of the project in the area. We feel that there is nothing that will delay it except the mechanics of State law and the time that is involved to get the contract processed.

Chairman HAYDEN. How long will it take to complete the project?

Mr. DOMINY. It is scheduled for completion, Mr. Chairman, in fiscal 1961, except for drainage, which will carry over into the early part of fiscal 1962.

Chairman HAYDEN. What crops will be raised there?

Mr. DOMINY. This will be a general crop project. It will be mostly feed grains and hay, and livestock economy, with some fruits.

ROGUE RIVER PROJECT, TALENT DIVISION

Chairman HAYDEN. The House Committee recommended the allowance of the budget estimate of $6,041,000 for the Rogue River project, Talent division. If there are no questions from members of the committee, we will include the justification in the record and take the next project.

(The justification referred to follows:)

Location

Jackson County, southwestern Oregon. Project works extend westward about 45 miles from the stream collection facilities high in the Cascade Range to the vicinity of Medford, Oreg. through the area known as Bear Creek Valley.

Authorization

Public Law 606, 83d Congress, 2d session (68 Stat. 752).

Description

Purpose of the project is to provide an adequate water supply for 18,020 acres of irrigable land, develop 16,000 kilowatts of power, reduce flood damages, and produce incidental benefits associated with recreation and fish and wildlife. The project facilities will include Howard Prairie Dam and Reservoir, Emigrant Dam and Reservoir, Keene Creek Dam and Reservoir, the existing Hyatt Prairie Reservoir, the South Fork collection canal, Daley collection canal, Dead Indian collection canal, Howard Prairie delivery canal, Ashland lateral, East lateral, West lateral, Talent lateral, Phoenix Canal, sublaterals, and drains. Power facilities will consist of the Green Springs powerplant with 1 unit having an installed nameplate rating of 16,000 kilowatts and appurtenant switchyard.

Benefit-to-cost ratio

1.70 to 1.0.

Summarized financial data

Estimated total obligations	$20,526,000
Total obligations, fiscal year 1957	—2,220,000
Total obligations, fiscal year 1958	—6,041,000
Balance to complete	12,265,000

On a cost basis the fiscal year 1958 program will total $6,459,937. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of cost to obligations.

Change in total project costs and obligations

	Costs	Obligations
Fiscal year 1957 congressional justification	$19,932,000	$19,260,000
Fiscal year 1958 congressional justification	21,188,000	20,526,000
Increase	1,256,000	1,266,000

The total estimated cost of the Talent division, Rogue River Basin project, has been increased from $19,932,000 to $21,188,000 due to indexing feature costs to current prices.

Allocation of estimated total project cost

Allocation of total amount assigned to this division:	
Reimbursable:	
Irrigation	$12,321,000
Power	8,261,000
Subtotal, reimbursable	20,582,000
Nonreimbursable:	
Flood control	354,000
Recreation	156,000
Fish and wildlife	96,000
Subtotal, nonreimbursable	606,000
Total amount allocated	21,188,000
Repayment of reimbursable costs:	
Irrigation allocation:	
By irrigation water users	6,825,050
Deferred (contingent on future development)	161,359
Financial assistance from power	5,334,591
Subtotal, irrigation	12,321,000
Power allocation: Power revenues	8,261,000
Total, reimbursable amount	20,582,000

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$379.00
To be repaid from power revenues	296.00
Deferred	9.00
Total	684.00
Annual water user charges:	
Construction	6.30
Operation and maintenance	[1] 6.08
Total	12.38

[1] Includes operating costs on existing project facilities.

Repayment contracts

A contract with the Talent irrigation district covering $5,810,000 of project cost allocated to irrigation was executed by the water users in August 1956. Contracts with the Medford and Rogue River Irrigation Districts for a supplemental water supply from the project are scheduled to be completed at an early date.

Physical data

Feature	Type	Capacity	Height	Length
Howard Prairie Dam and Reservoir	Earth fill	62,000 acre-feet	94 feet	940 feet.
Emigrant Dam and Reservoir	do	40,000 acre-feet	196 feet	730 feet.
Keene Creek Dam and Reservoir	do	370 acre-feet	68 feet	600 feet.
Collection canals	Earth and concrete lined.	60-65 cubic feet per second.		13 miles.
Delivery canals and laterals	do	Serves 18,020 acres		119.7 miles.
Green Springs powerplant (1 unit)		16,000 kilowatts		
Acres to be served:				
Full supply		7,990 acres		
Supplemental supply		10,030 acres		
Total		18,020 acres		

Status

Construction of the project was started in fiscal year 1957. During the year contracts will be awarded and work begun on Howard Prairie Dam, the 0.7-mile-long tunnel on the South Fork collection canal, Howard Prairie delivery canal (first section), and the 16,000-kilowatt Green Springs powerplant and switchyard, conduit and wasteway, hydraulic turbine and generator. In conjunction with the above construction work, the necessary rights-of-way will be acquired, clearing necessary to carry on an orderly construction program will be done, relocation of existing properties will be initiated or accomplished, and the necessary camp facilities will be established. A contract will be awarded late in the fiscal year for construction of Keene Creek Dam and related facilities, with work scheduled to begin early in fiscal year 1958. In addition, contracts will be awarded, for delivery in subsequent years, of accessory electrical equipment for the Green Springs powerplant. Also negotiations will be completed with the National Park Service on the nature and scope of the project recreational facilities.

Work proposed, fiscal year 1958

Howard Prairie Dam and Reservoir, $1,055,000.—The program provides for the completion of rights-of-way acquisition, partial clearing of the reservoir area, continued relocation of county and Forest Service roads, and progress payments on the prime contract.

Emigrant Dam and Reservoir, $400,000.—The program provides for completing acquisition of rights-of-way, partial relocation of existing property and completion of field data for preparation of designs and specifications for the prime contract which will be awarded late in the fiscal year.

Keene Creek Dam and Reservoir, $405,000.—This amount will cover progress payments on the prime contract, relocation of existing property, and related overhead costs.

Collection canals, $218,000.—Program provides for progress payments on the 0.7 mile tunnel of the South Fork collection canal, collection of field data and clearing right-of-way for the Daley collection canal, and completing field data for a contract to be awarded during the fiscal year on the Dead Indian collection canal.

Delivery canals and laterals, $2,109,000.—This program provides for construction progress payments on the first section of Howard Prairie delivery canal, award of construction contracts and progress payments on the second and third sections of the Howard Prairie delivery canal, the Ashland, East, and Talent laterals, and related overhead costs.

Drains, $6,000.—This amount will cover costs of collecting design data on the drainage system.

Green Springs powerplant and switchyard, $2,181,000.—This program provides for: Contract progress payments on the powerhouse, power conduit and wasteway, hydraulic turbine, furnishing and installing the generator, switchyard, furnishing and installing the penstock, the gantry crane, accessory electrical equipment, award of a contract for the Cascade Divide tunnel and inlet structure, and related overhead expenses.

General property, $45,000.—This amount provides for a portion of the cost of the fish screens at Howard Prairie Dam and the purchase of maintenance equipment.

Contributions to civil service retirement fund, $41,400.—Initial year contributions to civil service retirement fund.

Adjustments. —$463.—Minor clearing account adjustments affecting costs but not funds.

Other expenditures and credits, $51,063.—Provides for acquisition of service facilities during fiscal year 1958, the cost of which will be distributed to permanent property in subsequent years.

Undelivered orders, —$470,000.—Represents liquidation of prior-year contract oblications.

WAPINITA PROJECT, JUNIPER DIVISION

Chairman HAYDEN. The House committee also recommended allowance of the budget estimate of $400,000 for Wapinitia project in Oregon. This is another new start.

We will include the justification in the record.

(The justification referred to follows:)

Location

In Wasco County of north central Oregon. The 2,108 acres to be served lie in the Juniper division, adjacent to the village of Maupin, which is about 100 miles southeast of Portland and 45 miles south of The Dalles, Oreg. The Wasco Dam site at Clear Lake is about 30 miles due west of Maupin.

Authorization

Act of June 4, 1956 (70 Stat. 244) (70 Stat. 245).

Description

The primary purpose of the project is to provide a supplemental water supply for irrigation of 2,108 acres in the existing Juniper division through the construction of Wasco Dam on Clear Creek. Project facilities will consist of the Wasco Dam and Reservoir from which water will be released into Clear Creek for diversion downstream to the project lands.

Benefit-cost-ratio.—1.8 to 1.

Summarized financial data

Estimated total obligations	$514,000
Total obligations, fiscal year 1958	400,000
Balance to complete	114,000

On a cost basis the fiscal year 1958 program will total $191,000. The narrative justification whcih follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Estimated total project costs	$581,000

Allocation of estimated total project cost

Reimbursable: Irrigation	$546,130
Subtotal, reimbursable	546,130
Nonreimbursable: Recreation	34,870
Subtotal, nonreimbursable	34,870
Total	581,000
Repayment of reimbursable costs: By irrigation water users	546,130
Total	546,130

Repayment costs per acre

Federal investment per acre: To be repaid from water users	$259.00
Total	259.00
Annual water user charges:	
Construction	6.48
Operation and maintenance	[1] .44
Total	6.92

[1] Does not include the cost of operating existing project works.

Repayment contracts

A repayment agreement providing for return of all reimbursable costs is scheduled for execution by the Juniper Flat District Improvement Co. in February 1957.

Physical data

Feature.—Wasco Dam and Reservoir.
Type.—Earth and rock fill.
Capacity.—13,060 acre-feet.
Height.—56 feet.
Length.—370 feet.

Status

No construction work has been started and none will commence prior to fiscal year 1958. During fiscal year 1957, under "Advance planning," a repayment contract will be negotiated and a definite plan report prepared and approved.

Work proposed, fiscal year 1958

Wasco dam and reservoir, $191,300.—The program for fiscal year 1958 provides for awarding construction contracts covering all of the construction work required. All necessary rights-of-way will be purchased. Final data for designs will be collected; advance notice will be issued to prospective contractor bidders by October 1957 so that they may inspect the site before the usual heavy winter snowfall. Designs and specifications will be prepared and contracts awarded for the reservoir clearing and the construction of the dam, spillway, and outlet works. Funds covering the cost of replacement of existing recreational facilities and of providing minimum basic recreational requirements will be transferred to the National Forest Service in accordance with the authorizing legislation.

Contribution to civil-service retirement fund, $700.—Initial year contribution to civil-service retirement funds.

Adjustments, $1,000.—Represents service facilities acquired by nonappropriation transfer.

Other expenditures and credits, $13,000.—Expenditure for service facilities which will be charged to permanent project features in fiscal year 1959.

Undelivered orders, $196,000.—Obligations incurred under contracts awarded in fiscal year 1958 which will be paid for in fiscal year 1959.

AUTHORIZATION OF PROJECT

Chairman HAYDEN. When was this project authorized?

Mr. BENNETT. This project was authorized June 4, 1956, Public Law 559, 84th Congress.

Chairman HAYDEN. What is the total estimated cost?

Mr. BENNETT. The total estimated cost is $581,000.

Chairman HAYDEN. What is the benefit-to-cost ratio on the project?

Mr. BENNETT. 1.8 to 1 is the benefit-cost ratio.

Chairman HAYDEN. How much of the total cost is reimbursable and from what source?

Mr. BENNETT. $546,000 is reimbursable by the water users, which they can pay back in 40 years. There is a small allocation of approximately $35,000 nonreimbursable to recreation.

Chairman HAYDEN. It is allocated to recreation?

Mr. BENNETT. Yes, sir.

Chairman HAYDEN. Do you have a repayment contract?

Mr. DOMINY. Yes, sir. We already have it executed, sir.

Chairman HAYDEN. How long will it take to complete this project?

Mr. DOMINY. This project is scheduled for completion over 2 fiscal years, 1958 and 1959.

Chairman HAYDEN. What kind of crops do they raise?

Mr. DOMINY. This is a general agricultural project.

PROVO RIVER AND WEBER BASIN PROJECTS

Chairman HAYDEN. The House committee recommended the allowance of the budget estimate for the Utah projects. They are Provo River project, $574,000; Weber Basin project $6,500,000.

If there are no questions or comments on these projects, I will insert the justification in the record.

(The justification referred to follows:)

PROVO RIVER PROJECT, UTAH

Location.—Summit, Wasatch, Utah, and Salt Lake Counties, Utah, with project works extending from the Duchesne tunnel—about 20 miles east of Kamas, Utah—southwesterly to Provo, Utah, and thence northwesterly to Salt Lake City, Utah.

Authorization.—The Provo River project was authorized under the provisions of the act of December 5, 1924 (43 Stat. 701), by a finding of feasibility of the Secretary of the Interior on November 13, 1935, approved by the President November 16, 1935; a finding of feasibility of the Secretary of the Interior on October 21, 1938, approved by the President on October 24, 1938; and the act of March 29, 1948 (62 Stat. 92). Deer Creek powerplant was authorized by the Secretary of the Interior by finding of feasibility on August 20, 1951.

Description.—The project will conserve water resources of Weber, Provo, and Duchesne Rivers for supplemental irrigation of 46,609 acres, for temporary provision of a full irrigation supply for 10,000 acres of new land, and for provision of domestic and industrial water supplies for the metropolitan districts of Salt Lake City, Provo, Orem, Lindon, Pleasant Grove, American Fork, and Lehi. Facilities of the project include the Deer Creek Dam and powerplant (5,000 kilowatts) on Provo River, the Weber-Provo diversion canal, the Duchesne tunnel and diversion dam, enlargement and betterment of the Provo River Channel from Duchesne tunnel to Deer Creek Dam, Murdock diversion dam, Provo Reservoir Canal including south lateral of the Utah Lake Distributing Co. and canal, and the Salt Lake Aqueduct, including the terminal reservoir. A residence for the Dam

Tender has been constructed at Deer Creek Camp, where additional residences for powerplant operators will be located.

Summarized financial data

Estimated total obligations	$33, 559, 132
Total obligations to June 30, 1956	31, 863, 535
Total obligations, fiscal year 1957	985, 380
Total obligations, fiscal year 1958	574, 000
Balance to complete	136, 217

On a cost basis the fiscal year 1958 program will total $574,000. This program is explained in the narrative justification which follows.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$33, 242, 650	$32, 626, 584
1958 congressional justification	34, 357, 825	33, 559, 132
Increase	1, 115, 175	932, 548

The increase is principally due to the increase of the Provo River Channel revision in the project cost estimate.

Allocation of estimated total project cost

Estimated total project cost to be allocated:	
Total construction cost	$34, 246, 353
Contribution to civil-service retirement fund and funded Charges	111, 472
Total	34, 357, 825
Allocation of estimated total project cost:	
Reimbursable:	
Irrigation	8, 532, 687
Municipal and industrial water	24, 774, 138
Power	1, 051, 000
Total	34, 357, 825
Repayment of reimbursable costs:	
By irrigation water users	8, 532, 687
By municipal and industrial water users	24, 774, 138
By power revenues	1, 051, 000
Total	34, 357, 825

Repayment costs per acre

Federal Investment per acre: To be repaid from water users	$151. 00
Total	151. 00
Annual water user charges: Distribution systems:	
Construction	2. 86
Operation and maintenance	. 90
Total	3. 76

Repayment contracts.—Cost of Deer Creek powerplant will be repaid from the sale of power over a period of approximately 50 years. A contract has been executed with the Provo River Water Users Association for the repayment of construction costs of the Deer Creek division and with the Metropolitan Water District of Salt Lake City for the repayment of construction costs of the aqueduct division.

Physical data

Feature	Type	Capacity	Height	Length
			Feet	
Deer Creek Dam	Earth fill	152,564 acre-feet	155	1,300 feet.
Deer Creek powerplant	2 units-hydro	5,000 kilowatts		
Duchesne tunnel	Concrete-lined	600 cubic feet per second		6 miles.
Weber-Provo diversion canal	Earth and concrete-lined.	1,000 cubic feet per second.		9 miles.
Provo Reservoir Canal	do	550 cubic feet per second		23 miles.
Utah Lake distributing canal	do	40 cubic feet per second		9 miles.
Salt Lake aqueduct	Closed conduit-concrete and steel pipe.	150 cubic feet per second		42 miles.

Acres to be served

Deer Creek division: Supplemental supply 46,609

Status.—Construction began July 16, 1938. As of June 30, 1956, the project was approximately 95 percent complete. Construction will continue in fiscal year 1957 on the Provo River channel and Deer Creek power facilities with the substation and transmission line scheduled for completion in fiscal year 1957.

WORK PROPOSED, FISCAL YEAR 1958

Provo River channel revision, $500,000.—Acquisition of rights-of-way and construction of channel revisions will continue with contracts to be awarded for construction of earth work and structures in the first quarter.

Deer Creek powerplant, $65,291.—Work will continue to completion under the prime contract awarded in fiscal year 1956, with initial power generation from both units scheduled in the first quarter of fiscal year 1958.

Deer Creek substation, $4,635.—Work will be completed on this feature the latter part of fiscal year 1957 or early part of fiscal year 1958.

Contribution to civil-service retirement fund, $4,300.—Initial year contribution to civil-service retirement fund.

Adjustments, $–226.—Minor cost adjustments.

WEBER BASIN PROJECT, UTAH

Location.—North-central Utah, Davis, Weber, and Morgan Counties, most of Summit County, and a small portion of Box Elder County. The project works extend west from storage facilities on the Weber River to lands between the Wasatch Range and Great Salt Lake.

Authorization.—Act of August 29, 1949 (63 Stat. 677).

Description.—The purpose of this project is to develop the basin's unused water for irrigation and municipal and industrial needs, provided needed drainage outlets for waterlogged lands, protect lands and improvements from flood damage, produce hydroelectric power for irrigation pumping, increase recreational opportunities, improve fish and wildlife resources, and reduce the mosquito infestation in the project area. The project is designed to furnish 164,000 acre-feet of water to 51,210 acres of potentially productive land now unirrigated, and to 24,400 acres now only partially irrigated. Approximately 49,000 acres of waterlogged land will be reclaimed. More than 40,000 acre-feet of water will be made available for municipal and industrial use in Davis and Weber Counties. About 65,500 acre-feet of return flow from irrigated land that will occur in marshy areas too low to be reclaimable will be used for migratory waterfowl refuges. Powerplants will have an installed capacity of 5,400 kilowatts.

Benefit-cost ratio.—2.7 to 1.

Summarized financial data

Estimated total obligations	$68,780,000
Total obligations to June 30, 1956	20,932,221
Total obligations, fiscal year 1957	9,466,224
Total obligations, fiscal year 1958	7,434,735
Balance to complete	30,946,820

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On a cost basis the fiscal year 1958 cost program will total $7,894,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Changes in total project costs and obligations

	Costs	Obligations
1957 congressional justifications	$68,602,000	$66,712,000
1958 congressional justifications	70,670,000	68,780,000
Increase	2,068,000	2,068,000

The total estimated cost of the Weber Basin project has been increased from $68,602,000 to $70,670,000. This increase reflects actual bid prices on contracts awarded during the first half of 1956, and the application of current price indexes to previous estimates in the case of work not yet advertised for bids. Total obligations will be increased an additional estimated $300,000 for contributions to the civil service retirement fund.

Total estimated project cost and allocation

Total estimated project cost to be allocated:	
Total construction cost	$70,270,000
Transitional development costs	100,000
Contributions to civil service retirement fund	300,000
Total	70,670,000
Allocation of total estimated project cost:	
Reimbursable:	
Irrigation	41,294,000
Municipal and industrial water	16,685,000
Subtotal	57,979,000
Nonreimbursable:	
Flood control	7,393,000
Recreation	3,568,000
Fish and Wildlife	1,730,000
Subtotal	12,691,000
Total	70,670,000

Repayment of reimbursable costs

By irrigation water users	$27,714,000
By municipal water users	29,227,000
By power revenues	1,038,000
Total	57,979,000

Repayment costs per acre

To be repaid from irrigation water users	$370
To be repaid from municipal water users	180
Total	550
Annual water users charges (per acre-foot):	
Construction	2.70
Operation and maintenance	1.00
Total	3.70

REPAYMENT CONTRACTS

A repayment contract covering the reimbursable construction costs of the project was executed on December 12, 1952, by the Weber Basin Water Conservancy District. The district is negotiating with water users for the sale of irrigation, municipal and industrial water. Contracts relating to the enlargement of Pineview Dam and Reservoir, modification of power at existing plants, and the sale of surplus project power, and the operation of Echo Reservoir for flood control are being negotiated.

Physical data

Feature	Type	Capacity	Height	Length
				Miles
Dams and reservoirs (5)	4 earth 1 concrete	445,000 acre-feet		
Canals and aqueducts (7)	Various	80 to 1,105 cubic feet per second		97
Pumping plants (2)	Electric powered	750 cubic feet per second		
Power facilities (2)		5,400 kilowatts		
Lateral systems	Various	Serves 37,700 acres, full supply		
Drains	Open and closed	29,000 acres reclaimed; 19,000 acres improved.		200
Recreational development	Public facilities for picnicing, boating, and related activities.			

Acres to be served

Full supply	51,210
Supplemental	24,400
Total	75,610

Status.—Construction was begun during December 1952. The construction of Wanship Dam, Gateway Canal and Tunnel, Stoddard diversion dam, Slaterville diversion dam, and the enlargement of Pineview Dam will be substantially completed. The construction of the Davis and Weber aqueducts and related lateral systems will be underway to the point that the first deliveries of water will be possible. Construction of the Wanship and Gateway powerplants will be underway. The construction of initial pilot drains will be substantially completed, and the construction of the first part of the complete drainage system will be started. Construction of basic recreational facilities at Wanship Dam and Pineview Dam will be underway. Project investigation in connection with the remaining features will continue.

WORK PROPOSED FISCAL YEAR 1958

Wanship Dam and Reservoir, $154,000.—This sum provides for the completion of miscellaneous items and the settlement of contracts and claims.

Wanship power facilities, $192,000.—Provides for the completion of the powerplant, switchyard, and connection to existing transmission facilities. Initial power will be generated late in the fiscal year.

Lost Creek Dam and Reservoir, $5,000.—Represents a pro rata portion of the project development cost. No work is scheduled for this feature until fiscal year 1960.

East Canyon Dam and Reservoir enlargement, $4,000.—Represents a pro rata portion of the project development cost. No work is scheduled for this feature until fiscal year 1961.

Gateway canal and diversion works, $106,000.—Provides for the completion of miscellaneous items, including chlorination facilities located at the tunnel inlet.

Gateway power facilities, $636,000.—Provides for the completion of the power plant and switchyard. Initial power will be generated late in the fiscal year.

Weber aqueduct and laterals, $992,000.—This sum provides for the completion of a pump lift discharge line and the laterals.

Davis aqueduct and laterals, $3,336,000.—Work will be continued on trunklines, pump lifts, and discharge lines, and access roads pertaining to the aqueduct proper. Work will also continue on the major lateral systems.

Pineview Dam and Reservoir enlargement, $431,000.—Provides for the completion of miscellaneous items, final payments on right-of-way acquisitions, set-

tlement of contracts and claims. All work scheduled on this feature will be completed.

Slaterville diversion works, $2,000.—Provides for the completion of miscellaneous items.

Willard canals and pump, $115,000.—Field data required for designs and specifications will be collected and submitted to the chief engineer.

Willard Dam and Reservoir, $1,335,000.—Contract will be awarded and construction started. Right-of-way acquisition will be continued.

Warren canal enlargement and laterals, $18,000.—Field data required for designs and specifications will be collected and submitted to the chief engineer.

Layton canal, pump, and laterals, $60,000.—Field data required for designs and specifications will be collected and submitted to the chief engineer.

Drains, $486,000.—Contracts will be awarded for the construction of the complete drainage system in area A, west of Bountiful and Farmington. This will incorporate the A–1 pilot drain previously constructed. This area is to receive irrigation water from the Davis aqueduct in 1958 and 1959, and must be provided with some drains before irrigation water is applied. Preconstruction surveys will be continued in the remaining areas to be drained.

Recreational development, $300,000.—Construction of basic recreational facilities at Wanship Dam and Reservoir will be essentially completed, while similar construction at Pineview Dam and Reservoir will be continued. Studies will be continued in connection with proposed recreational facilities in the Willard Dam area.

Contributions to civil-service retirement fund, $72,000.—Estimate of contributions required by Public Law 854.

Transitional development, $10,000.—This sum will be used to help pay the cost of operation and maintenance of facilities which will be serving a comparatively small area during the first year of operation.

Adjustments, $360,000.—Represents allowance for payment to Ogden Water Users Association in connection with enlargement of Pineview Dam if necessary. This is a nonfunded item.

Other expenditures and credits, $1,000.—Expenditures for stores to be charged to permanent project features in future years.

CHIEF JOSEPH DAM PROJECT

Chairman HAYDEN. The House committee recommended the allowance of the budget estimate of $1,138,000, for the Chief Joseph Dam project, Foster Creek division. The justification will be included in the record.

(The justification referred to follows:)

Location.—The Foster Creek division is located adjacent to the Columbia River in north central Washington midway between the Wenatchee and Okanogan fruit belts.

Authorization.—Act of July 27, 1954 (69 Stat. 568).

Description.—The division will provide a full water supply for approximately 3,531 acres and supplemental water for 430 acres. The division is comprised of three units. (1) The Brewster Flat unit, with irrigable acreage of about 2,432 acres, lies west of the Okanogan River near its junction with the Columbia River. This unit is to be supplied by pumping from the Columbia River about 10 miles below Chief Joseph Dam. (2) The Bridgeport Bar unit is located along the south bank of the Columbia River below Chief Joseph Dam. It includes about 729 acres divided into 2 separate areas, the townsite area and the bar area. Water will be diverted from the left abutment of the Chief Joseph Dam to serve the 301 acres in the townsite area, and water pumped from the Columbia River about 6 miles below Chief Joseph Dam will serve the 428 acres included in the bar area. (3) The Blue Bottle Flat unit will irrigate about 800 acres of land by pumping from Rufus Woods Lake above Chief Bottle Dam. The Chief Joseph Dam and powerplant were authorized for construction and operation by the Corps of Engineers.

Benefit-cost ratio

Brewster Flat unit	5.41 to 1.00
Bridgeport Bar unit	2.72 to 1.00
Blue Bottle Flat unit	7.14 to 1.00

Summarized financial data

Estimated total obligations	$3,780,000
Total obligations to June 30, 1956	432,218
Total obligations, fiscal year 1957	1,401,782
Total obligations, fiscal year 1958	1,138,000
Balance to complete	808,000

On a cost basis the fiscal year 1958 program will total $1,217,563. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
Fiscal year 1957 congressional justification	$4,444,000	$4,330,000
Fiscal year 1958 congressional justification	3,915,000	3,780,000
Decrease	529,000	550,000

The total estimated cost for the Foster Creek division of the Chief Joseph Dam project has been reduced from $4,444,000 to $3,915,000. The change is due principally to a revised plan for furnishing water to the townsite area, and to a new plan for furnishing power to the Brewster Flat pumping plant substations, utilizing Bonneville Power Administration transformation facilities at the Brewster substation, and elimination of the requirement for transitional irrigation development.

Allocation of total project cost

Reimbursable: Irrigation	$3,897,500
Nonreimbursable: Fish and Wildlife	17,500
Total amount allocated	3,915,000

Repayment of reimbursable amount

By irrigation water users	$1,944,300
By power revenues	[1] 2,082,000
To be repaid through irrigation power rate	4,100
Total reimbursable amount	[2] 4,030,400
Repayment costs per acre:	
Federal investment per acre:	
To be repaid from water users	$491
To be repaid from power revenues	[1] 526
To be repaid from irrigation pumping power revenues	1
Total	1,018
Annual water-user charges:	
Construction	9.82
Operation and maintenance	12.66
Total	22.48

[1] Power revenues from Chief Joseph Dam and powerplant constructed by Corps of Engineers.

[2] Includes $7,500 for outlet works Chief Joseph Dam, $35,800 for Chief Joseph Reservoir head, and $89,600 for Chief Joseph substation assigned Forest Creek division.

Repayment contracts.—Repayment contracts for that part of the reimbursable costs of the project assigned to water users of the bar area in the Bridgeport Bar unit and of the Brewster Flat unit have been executed with the Bridgeport Bar Irrigation District and the Brewster Flat Irrigation District. Negotiations on the townsite area in the Bridgeport Bar unit will be continued during fiscal year 1957 and will be completed before initiation of construction. Construction of the Blue Bottle Flat unit will not be scheduled until more of the

landowners indicate an active interest in developing their lands and sign a repayment contract. Power revenues of the Chief Joseph Dam project are to be used to return those irrigation costs not covered by repayment contracts with water users organizations.

Physical data

Feature	Type	Capacity	Length
Brewster Flat unit pumping plant	3 stages	2—each 46.8 c. f. s. 1—each 39 c. f. s.	
Distribution system reservoir (2)	Pipe		17 miles.
	Steel tank	300,000 gallons	
	do	500,000 gallons	
Bridgeport Bar unit:			
Bar area:			
Pumping plant	200-foot dynamic head	4,000 g. p. m.	
Distribution system	Steel and asbestos cement pipe.		3 miles.
Reservoir	Steel tank	100,000 gallons	
Townsite area:			
Pumping plant	100-foot dynamic head	1,000 g. p. m.	
Main line	Canal	3,000 g. p. m.	1.5 miles.

Acres to be served

Full supply:		
Brewster Flat unit		2,275
Bridgeport Bar unit		456
Bar area	(339)	
Townsite area	(117)	
Blue Bottle Flat unit (construction deferred)		800
Subtotal		3,531
Supplemental supply:		
Brewster Flat unit		157
Bridgeport Bar unit		273
Bar area	(89)	
Townsite area	(184)	
Subtotal		430
Total		3,961

Status.—Construction was begun during fiscal year 1956 with the award of a construction contract for the Bridgeport unit, bar area. Construction on the Brewster Flat unit will begin during fiscal year 1957. This work will consist primarily of the Brewster Flat pumping plant and relift plant, distribution system, transmission and substation facilities and related operating facilities. The latter include the start of construction on two resident operator's houses, combination shop-garage, and a double garage which the irrigation district has requested be made available to them for occupancy by their manager and pump operator prior to initial operation of Brewster Flat unit. Preconstruction and assembly of design and other data on the Bridgeport unit townsite area will also be underway in fiscal year 1957 looking toward the completion of negotiations on the repayment contract and start of construction late in the fiscal year.

WORK PROPOSED, FISCAL YEAR 1958

Brewster Flat unit

Pumping plant and relift plant, $471,587.—The pumping plant, relift plant, reservoirs and discharge lines will be completed and the plant will be readied for initial operation in April 1958.

Distribution system, $559,332.—Construction of the pipe-distribution system and the delivery turnouts will be completed. Initial operation is scheduled for April 1958.

Drainage facilities, $36,200.—Studies and investigations of the drainage works will continue.

Transmission line and substations, $24,718.—Power and substation facilities will be completed ready for the initial operation of the system during April 1958.

General property, $43,836.—The operational headquarters buildings for the irrigation district will be completed and immediately turned over to the Brewster Flat Irrigation District.

Bridgeport Bar unit (townsite area)

Gravity canal and relift plant, $76,559.—The contract to be commenced in fiscal year 1957 will be completed and the system readied for initial operation.

Contribution to civil-service retirement fund, $7,800.—Initial year contribution to civil-service retirement fund.

Adjustments, —$2,469.—Nonappropriation transfers affecting costs but not funds.

Other expenditures and credits, —$3,963.—Represents cost of service facilities accrued in prior years which will be distributed to permanent property in the budget year.

Undelivered orders, —$75,600.—Liquidation of prior-year contract obligations.

COLUMBIA BASIN PROJECT

Chairman HAYDEN. The House committee recommended the allowances of the budget estimate of $13,850,000 for the Columbia Basin project.

I will include that justification in the record.

(The justification referred to follows:)

Location.—Central part of the State of Washington, including portions of Okanogon, Grant, Douglas, Franklin, Adams, and Walla Walla Counties. The major project features and the area to be irrigated extend from the Grand Coulee Dam, approximately 95 miles west of Spokane, Wash., southward for 125 miles to the vicinity of Pasco, Wash.

Authorization.—By section 2, Rivers and Harbors Act of August 30, 1935 (49 Stat. 1028, 1039); authorized and reauthorized by Columbia Basin Project Act of March 10, 1943 (57 Stat. 14).

Description.—The project is to furnish water to approximately 1,029,000 acres of new land and has a total rated electrical generating capacity of nearly 2 million kilowatts. Principal features include the Grand Coulee Dam; right and left powerplants and adjoining switchyards; and the Grand Coulee pumping plant, all located at Coulee Dam; primary irrigation works including the 26-mile equalizing reservoir formed between the North Dam and Dry Falls Dam; the main, west, east low, and east high canal systems, served by releases from the equalizing reservoir; the Potholes Canal system, served by releases from the Potholes Reservoir; and laterals; drains; pumping plants; operating facilities; and other properties for the irrigation of the new land.

Benefit-cost-ratio.—4.30 to 1.00.

Summarized financial data

Estimated total obligations	$762,055,000
Total obligations to June 30, 1956	495,310,385
Total obligations, fiscal year 1957	15,611,402
Total obligations, fiscal year 1958	13,850,000
Balance to complete	237,283,213

On a cost basis the fiscal year 1958 program will total $14,100,000. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
Fiscal year 1957 congressional justification	$753,362,000	$759,362,000
Fiscal year 1958 congressional justification	756,055,000	762,055,000
Increase	2,693,000	2,693,000

The increase in total estimated cost of the project reflects the index rise of approximately 5 percent during the past year on work yet to be done, and provision for contribution to the civil-service retirement fund plus the addition of the special provisions of the fiscal year 1957 Appropriation Act which provided spillway lighting for Grand Coulee Dam and construction for protection of Soap Lake waters. Increases and decreases resulting from new field data, present-day bid prices, design modifications, etc., are also reflected in the revision.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$562,236,700
Power	192,304,860
Subtotal, reimbursable	754,541,560
Nonreimbursable:	
Flood control and navigation	1,000,000
Contributions	313,440
Floodlighting, Grand Coulee Dam	200,000
Subtotal, nonreimbursable	1,513,440
Total	756,055,000

Repayment of reimbursable costs

By irrigation water users	$87,465,000
By irrigation water users (part-time farm units)	1,000,000
By power	666,076,560
Total	754,541,560

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$85.00
To be repaid from power revenues	[1] 460.00
Total	540.00
Annual water user charges:	
Construction	2.12
Operation and maintenance	[2] 7.45
Total	9.57

[1] A portion of this investment cost is being returned through the annual charge to the water users for pumping power included in the irrigation operation and maintenance expenses.

[2] The average water rental charge to the water user is $6. This amount covers the water allotment which is the base quantity plus ½ acre-foot of supplemental water. The estimated average replacement cost of $1.45 will not be reached for several years. Average charge for replacements for the past 3 years has been approximately 3 cents per acre.

Repayment contracts.—Repayment contracts were executed in 1945 with the 3 irrigation districts of the project which provide for the repayment of irrigation construction costs averaging approximately $85 per acre. The repayment contracts with the irrigation districts limit the obligation of the United States to make expenditures for construction of irrigation works and the water users repayment obligations. These provisions are currently under review with the district boards and others in contemplation of negotiating new repayment obligations in light of current costs and economic conditions. Project costs not covered by irrigation district repayment contracts, exclusive of the nonreimbursable allocation and costs detailed above, will be repaid from commercial power and pumping revenues.

Physical data

Feature	Type	Capacity	Height (feet)	Length
Grand Coulee Dam and Reservoir.	Concrete gravity	9,402,000 acre-feet	550	4,173 feet.
Grand Coulee powerplant.	Hydro	1,974,000 kilowatts		
Primary irrigation works:				
Grand Coulee pumping plant.	780,000 horsepower	16,000 cubic feet per second		
Feeder canal	Concrete lined	do		1.7 miles.
Equalizing reservoir	2 earth-fill dams	1,275,000 acre-feet		26 miles.
Main canal		13,200 cubic feet per second		20.85 miles.
Other irrigation works:				
O'Sullivan Dam and Potholes Reservoir.	Earth fill	675,000 acre-feet	200	19,000 feet.
Conduits and canals	Earth and concrete lined.	To 5,100 cubic feet per second.		430 miles.
Distribution systems.		To serve 1,029,000 acres full supply.		

Acres to be served

Full supply 1,029,000

Status.—The Grand Coulee Dam, with its two powerplants and switchyards, is functionally complete. The first six 65,000-horsepower Grand Coulee pumping units, the equalizing reservoir, and main canal have been operated successfully and water deliveries made as planned. Status of the major canal system is as follows: The west canal, with the exception of the Royal branch, and the Potholes east canal including the initial reach of the Eltopia branch are functionally complete and operating, and the east low canal is in operation through the fifth section. Construction has been completed on lateral distribution systems, pumping plants with appurtenant switchyards and transmission lines, drains, service buildings, operators' quarters, and other necessary facilities for delivery of water to approximately 301,000 acres. Construction of facilities to serve an additional 47,000 acres is nearing completion and this land will be available for testing in the spring of 1957. Much of the lateral construction for the 34,000 acres in the 1958 testing year program is underway and all of the 22,000 acre 1959 program will be placed under contract during the current fiscal year. The settlement and settler assistance program and the settlement land purchase and resale program have been under way for a number of years and will continue. Construction started in 1934 and the project, overall, will be about 67 percent complete by June 30, 1957.

WORK PROPOSED, FISCAL YEAR 1958

Primary irrigation works, $70,000.—The program provides for studies on additional pumping units for the Grand Coulee pumping plant and the second barrel of the Bacon siphon and tunnel.

West canal irrigation area, $2,891,000.—Work on the lateral systems in blocks 77, 79, and 85 will be completed as well as the Evergreen and Frenchman Springs pumping plants, with appurtenant switching and transmission facilities, which serve blocks 77, and 79 respectively. Contracts will be awarded and construction started on block 82. Operating facilities and necessary residences for the new areas are also included in the program as well as procurement of right-of-way, drainage, and essential deferred and supplemental construction which will be performed as the need develops.

East low canal irrigation area, $1,233,000.—Contract award for the lateral system in block 401 early in the first quarter, will allow for completion of facilities and water delivery to 1,400 acres on a testing basis in 1958. Completion of facilities serving 12,000 acres in block 46 will be accomplished early in the fiscal year. Work on drains, including the EL68D drain wasteway system, and deferred and supplemental construction will be accomplished as the need develops.

Potholes irrigation area $9,056,900.—Construction work on the Wahluke siphon will be in progress for the entire year as will work on the Esquatzel diversion canal, the White Bluffs pumping plant No. 1 and block 20 lateral system served by the pumping plant. Awards will be made during the year for starting construction on the Wahluke branch canal, enlargement of sections 1 and 2 of the Potholes

east canal, and the radar pumping plant which serves blocks 21 and 48. Operating facilities, necessary residences, right-of-way procurements, drains and deferred and supplemental construction are included in the program.

East high canal irrigation area, $20,000.—Funds are programed for the continuation of system studies and estimates in connection with the plan for construction of this irrigation area.

Pasco-Burbank pumping units, $73,000.—Block 3 lateral system, including the Burbank pumping plants Nos. 2 and 3 along with appurtenant transmission facilities which serve this 3,000-acre block will be completed.

Other irrigation plant facilities, $120,000.—Operating equipment will be purchased to fill the requirement for additional equipment necessary to operate the new lateral systems and other new irrigation facilities.

Special distribution systems, part-time farm units, $25,000.—Program provides for studies of special distribution systems and for construction as necessary.

Contribution to civil service retirement fund, $181,000.—Initial year contribution to civil service retirement fund.

Settlement and settler assistance, $150,000.—The amount programed is for continuing the selection of settlers, ownership conformance, development farm operation, providing information to prospective settlers, and general project development activities. Funds also provide for the extension of a cooperative assistance contract with the State College of Washington.

Settlement land purchase and resale program, —$750,000.—The program provides for the purchase of land to facilitate the establishment of farm units, and the sale of farm units to project settlers. (Amounts received from sale of farm units are not available for expenditure.)

Adjustments, $1,031,000.—Principally contra entry for cost credit for lands sold under settlement land program as money received is not available for expenditure. Also includes funds for minor studies of possibilities for irrigating small areas of project-owned land in the upper Grand Coulee above elevation of equalizing reservoir.

Other expenditures and credits, —$250,000.—Represents prior-year expenditures for service facilities being charged to permanent project features in fiscal year 1958.

ESQUATZEL DIVERSION CANAL

Chairman HAYDEN. The House committee in its report directed the Bureau to initiate construction of the Esquatzel diversion canal, with a capacity of 5,300 second-feet, rather than the 1,000 second-feet. As I understand, this larger canal will eliminate certain flood protection works in the vicinity of Pasco, Wash.

Will you please comment on the House directive?

Mr. DOMINY. Yes. We are very pleased that the House saw fit to direct us to build that to the larger capacity, Mr. Chairman.

In cooperation with the Army Corps of Engineers, we have looked into the joint problem.

The Esquatzel wasteway is a natural wasteway which has terminated in a sinkhole just north of the town of Pasco.

In the past when the floods came down, the sinkhole was not adequate to handle it, and it wasted to the river through the town of Pasco. So the Army has been studying it from a flood control standpoint.

We got into the picture by reason of irrigating some two or three hundred thousand acres which drain into the Esquatzel Coulee. Thus there would be water in there continually beyond the capacity of the sinkhole. Accordingly, we knew that ultimately there would have to be a permanent drain built from this sinkhole over to the river.

In our joint studies, it became obvious that the cheapest way to accomplish both was for the one channel to be built, not only to a capacity sufficient for our drainage water, but sufficiently large to take care of the flood flow as well.

If that is done as one job, the Army estimated it would save several million dollars in the total bill.

Chairman HAYDEN. What is the added cost of increasing the capacity of the canal to 5,300 second-feet?

Mr. DOMINY. I am sorry, sir, I don't have those exact figures.

Mr. DEXHEIMER. I think that, Mr. Chairman, is a subject that is still being studied and planned by the Corps of Engineers. They will request funds for going ahead with that enlarged wasteway and floodway. This only is a start.

Rather than start it on 1,000 second-foot capacity, the committee has directed us to go to 5,300 second-feet as a start pending the final work by the Corps.

Mr. DOMINY. The added costs would be nonreimbursable because the Army's flood-control work would be nonreimbursable.

Chairman HAYDEN. I see.

LANGUAGE PROVISION NECESSARY

Do you need a provision in the bill or does the Secretary have adequate authority to allocate the added cost to flood control?

Mr. DOMINY. The Secretary would not have adequate authority without a directive from the Congress on this point.

Chairman HAYDEN. Do you have language to that effect?

Mr. DOMINY. In the near future the Army will complete a flood-control report which would indicate the costs for the flood-control work and how much savings would be accomplished by increasing the size of our drainageway. If we could get now the directive from Congress similar to what the House has already given us, to proceed with the added capacity with the understanding that when the Army had completed its report and knew what the flood-control portion amounted to, that amount could be nonreimbursable, that would be what we would like to have.

Chairman HAYDEN. Then we cannot do it in a committee report, but it would require a provision of law at some later time?

Mr. DOMINY. I think after the Army finishes its report, it could be taken care of at that time. If we could get now a firm directive from Congress to put the extra capacity in as part of our work, then we could conclude the rest after the Army finished its report.

Mr. DEXHEIMER. This language might be expanded to say that the flood-control costs would be nonreimbursable, when they are determined.

Mr. DOMINY. I can give you the figure that was given in the House, Mr. Chairman, on the savings. This was a figure given by our regional director and was confirmed by the Corps of Engineers on the basis of their preliminary report, recognizing, of course, that they do not have their final plans and estimates.

ESTIMATED COST

The Bureau has estimated the cost of completing the channel to the 5,300 second-feet, which is the figure sufficient to take care of the floods as well as the drain, would be $3,835,000. That is about $2,100,000 over the cost of a 1,000 second-foot channel, which is now estimated to cost $1,700,000.

As I recall, the Army in testifying on that same item, indicated that it would cost about $5 million for the flood control alone. So there would be appreciable saving in combining the two jobs.

YAKIMA PROJECT, ROZA DIVISION, WASHINGTON

Chairman HAYDEN. The House committee recommended the allowance of the budget estimate of $697,000 for the Yakima project, Roza division.

If there are no questions, I will insert the justification into the record.

(The justification referred to follows:)

Location.—South-central Washington in Yakima and Benton Counties. Roza division extends southeasterly for about 100 miles from a point 8 miles north of Yakima to 15 miles east of Prosser.

Authorization.—On November 6, 1935, the President approved a finding of feasibility submitted by the Secretary of the Interior under the provisions of the Fact Finders Act of December 5, 1924 (43 Stat. 672).

Description.—The primary purpose of the Roza division is to provide a full water supply for irrigation of 72,000 acres (45,000 acres by gravity flow and 27,000 acres by pumping) of semiarid land lying in a long narrow strip of the eastern slope of the Cascade Mountains in the south-central section of the State.

Facilities of the division include the Roza diversion dam, 95 miles of main canal, an extensive lateral distribution system, 7 wasteways, and 19 major pumping plants. The power system includes the Roza switchyard, 62 miles of 34.5-kilovolt transmission line serving the pumping plants and the 11,250-kilowatt Roza powerplant. The first 11 miles of the main canal were constructed with 2,200 cubic feet per second capacity, of which 965 cubic feet per second will serve the powerplant.

Benefit-cost ratio.—Construction started prior to establishment of this requirement.

Summarized financial data

Estimated total obligations	$21,792,807
Total obligations to June 30, 1956	19,039,362
Total obligations, fiscal year 1957	1,726,154
Total obligations, fiscal year 1958	697,000
Balance to complete	330,291

On a cost basis the fiscal year 1958 program will total $796,192. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
Fiscal year 1957 congressional justification	$22,092,431	$22,282,807
Fiscal year 1958 congressional justification	21,602,431	21,792,807
Decrease	490,000	490,000

The total estimated cost of the Roza division of the Yakima project decreased from $22,092,431 to $21,602,431. Modification in plan from a 2-unit generation plant, with each unit producing 5,625 kilowatts, to a single 11,250-kilowatt generator plant resulted in a substantial saving, partially offset by other required construction work on the Roza diversion dam and headworks and on the main canal from headworks to wasteway No. 2 (site of powerplant). The latter added work will eliminate severe winter icing and weed and debris accumulation, thus providing more efficient and economical year-round operation of the Roza powerplant.

Estimated total project costs (on site)	$21,602,431
Costs assigned from other facilities serving this division (or project):	
Allocation of storage costs from the Yakima project storage system	2,500,000
Funded operation and maintenance	779,100
Total to be allocated	24,881,531

Allocation of total amount assigned to this division

Reimbursable:	
Irrigation	$20,443,371
Power	4,438,160
Total	24,881.531

Repayment of reimbursable amount

Irrigation allocation:	
By irrigation water users	[1] $19,344,010
Financial assistance from power	1,099,361
Power allocation: Power revenues	4,438,160
Total reimbursable amount	24,881,531

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$266.00
To be repaid from power revenues	16.00
To be repaid from other sources	2.00
Total	284.00
Annual water user charges:	
Construction	4.10
Operation and maintenance	5.49
Total	9.59

[1] Includes $115,910 in contributions.

Repayment contracts.—Costs of irrigation facilities subject to repayment by water users are covered by an amendatory repayment contract with the Roza Irrigation District dated July 22, 1953 ($19,150,000) and a contract with the Terrace Heights District dated February 10, 1940 ($78,100). An additional $115,910 has been covered by contributions and advance payments. The cost not covered by contract will be returned by power revenues.

Power produced by the project will be used primarily for irrigation pumping. The construction cost of the power facilitties assigned to irrigation will be returned through application of the irrigation pumping component of the annual O. and M. cost. The remainder of the power cost will be returned from the sale of energy excess to irrigation pumping needs at commercial power rates.

Physical data

Feature	Type	Capacity	Height	Length
			Feet	
Roza diversion dam	Concrete weir with movable crest.		34	486 feet.
Pumping plants (19)		4.2 to 47.8 cubic feet per second.		
Main canals		Initial capacity 2,200 cubic feet per second.		95 miles.
Transmission system		34.5 kilovolts		62.86 miles.
Laterals		72,000 acres		435 miles.
Roza powerplant		Ultimate 11,250 kilowatts		

	Acres to be served
Full supply	72,000

Status.—Construction began on January 28, 1936,. As of June 30, 1957, the division will be approximately 94 percent complete on a cost basis. All main features of the division will be complete except the Roza power plant, the drainage system, and improvement work that must be done on the Roza diversion dam and headworks and on main canal wasteway No. 2 gates and siphons to eliminate icing and weed accumulation problems. The program for fiscal year 1957 provides for continuation of construction of the powerplant and incidental work on the substation, winterizing and eliminating weed accumulation problems at the diversion unit and main canal, and constructing additional drainage facilities on the Roza division under a comprehensive drainage plan in cooperation with adjoining irrigation districts.

WORK PROPOSED, FISCAL YEAR 1958

Main canal to wasteway No. 2, i. e., to Roza powerplant, $119,000.—This will provide all necessary improvement work on the main canal from the Roza diversion dam to wasteway No. 2, a distance of 10.9 miles. This section of the canal, previously operated only during irrigation seasons, will henceforth carry an additional 900 cubic feet per second of water for power generation and will be in use the year round.

Drainage system, $282,000.—For continuation of construction on facilities benefiting the Roza division.

Roza powerplant, $316,692.—For completion of the powerplant.

Roza switchyard and substation, $19,000.—The prime and the completion contracts for the Roza powerplant provide for a small amount of construction work on the switchyard and substation.

General property, $50,500.—Construction contracts to be awarded and completed for two dwellings and a garage, with appurtenant utilities, for use by the powerplant operators, and minor permanent service facilities at various locations on the division.

Contributions to civil service retirement fund, $9,300.—Initial-year contribution to civil-service retirement fund.

Adjustments, —$300.—Represents minor clearing account adjustments.

Other expenditures and credits, $808.—Increase in stores and service facilities in fiscal year 1958 to be distributed to project features in the following years.

Undelivered orders, —$100,000.—Liquidation of prior-year contract obligations in the budget year.

EDEN AND SHOSHONE PROJECTS, WYO.

Chairman HAYDEN. The House committee recommended the allowance of the budget estimates of $875,000 and $544,000 for the Eden and Shoshone projects in Wyoming. The justification will be included in the record.

(The justification referred to follows:)

EDEN PROJECT, WYOMING

Location.—Southwestern Wyoming in Sweetwater County. Project area surrounds communities of Eden and Farson, Wyo.

Authorization.—Originally under appropriation act of 1940 (53 Stat. 685). Changed to WCU project under Act of August 11, 1939 (53 Stat. 1418). Reauthorized June 28, 1949 (Public Law 132, 81st Cong., 1st sess.) (63 Stat. 277).

Description.—The purpose of the project is to provide a full water supply for the irrigation of 20,200 acres of arid land. Project facilities consist of Big Sandy Dam and Reservoir with a storage capacity of 39,700 acre-feet; the Means and Eden Canals which convey water from the Big Sandy Reservoir to a lateral system which is now in the process of enlargement, relocation, and extensions; the rehabilitated Little Sandy diversion dam and canal which will divert water from Little Sandy Creek to the Eden Canal; and a project drainage system.

Benefit-cost ratio.—1.3 to 1.

Summarized financial data

Estimated total obligations	$7,722,533
Total obligations to June 30, 1956	5,511,551
Total obligations, fiscal year 1957	1,079,367
Total obligations, fiscal year 1958	875,000
Balance to complete	256,615

On a cost basis the fiscal year 1958 program will total $947,700. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$7,519,332	$7,546,627
1958 congressional justification	7,672,532	7,722,533
Increase	153,200	175,906

The total etimated cost of the Eden project has been increased from $7,519,332 to $7,672,532. This increase reflects cost of completed work, adjustment of the estimate to reflect actual bid prices, and adjustment for civil-service retirement contributions.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$7,672,532.00
Total	7,672,532.00
Repayment of reimbursable costs:	
By irrigation water users	1,500,000.00
By power revenues	[1] 6,172,532.00
Total	7,672,532.00
Repayment costs per acre:	
Federal investment per acre:	
To be repaid from water users	74.00
To be repaid from power revenues	306.00
Total	380.00
Annual water-user charges:	
Construction	1.25
Operation and maintenance	2.00
Total	3.25

[1] Pursuant to act of June 28, 1949, costs in excess of $1,500,000 to be returned from power revenue of the Colorado River storage project.

Repayment contracts.—A contract was executed on June 8, 1950, with the Eden Valley Irrigation and Drainage District consistent with Public Law 132, 81st Congress, 1st session, authorizing completion of the Eden project. This law provides that construction costs of the irrigation features of the project which are not made reimbursable by the water users will be repaid from net revenues derived from the sale of power generated at hydroelectric plants of the Colorado River storage project in the upper basin when such plants are constructed.

Physical data

Feature	Type	Capacity	Height	Length
Big Sandy Dam and Reservoir	Earth filled	39,700 acre-feet	80 feet	2,300 feet.
Little Sandy diversion dam	do		10 feet	500 feet.
Means Canal				6.0 miles.
Little Sandy Canal				3.4 miles.
Eden Canal rehabilitation and enlargement.				10.8 miles.
Laterals		20,200 acres		67.3 miles.
Drains				37.0 miles.

Status.—Construction began July 30, 1941. As of June 30, 1957, the project will be approximately 85.3 percent complete. Construction will be underway on Little Sandy diversion dam, Little Sandy Canal, Farson area laterals, Eden area laterals, Farson area drains, Eden and Sandy area drains, and west side drains.

WORK PROPOSED, FISCAL YEAR 1958

Little Sandy Diversion Dam, $46,400.—The program provides for continuation of construction with completion of Little Sandy Diversion Dam scheduled for March 1958.

Little Sandy Canal, $35,600.—Continuation of construction under the same contract as Little Sandy diversion dam. Completion is scheduled for March 1958.

Farson area laterals, $365,000.—Construction will continue through fiscal year 1958.

Eden area laterals, $225,000.—Construction will continue through fiscal year 1958 with substantial completion scheduled for June 1958.

Farson area drains, $186,000.—Construction will continue through fiscal year 1958 under the same contract as Farson area laterals.

Eden and Sandy area drains, $56,000.—Construction will continue through fiscal year 1958 under the same contract as Eden area laterals. Substantial completion of construction is scheduled for June 1958.

West side area drains, $15,000.—Construction will continue through fiscal year 1958 under the same contract as Farson area laterals.

Contribution to civil-service retirement fund, $11,700.—Initial contributions to civil-service retirement fund.

Transitonal development cost, $7,000.—This represents costs incurred in operation and maintenance of unused reservoir, canal, and lateral capacity pending project settlement.

Other expenditures and credits, $72,000.—Credit entry representing prior year expenditures which are charged to permanent project features in fiscal year 1958.

SHOSHONE PROJECT, WYOMING

Location.—In the valley of the Shoshone River in Park and Big Horn Counties, northwestern Wyoming, with a small area extending into Carbon County, Mont. The project area includes the towns of Powell, Ralston, Garland, Deaver, and Frannie and lies adjacent to the towns of Cody and Cowley. Buffalo Bill Dam and Reservoir on the Shoshone River, a tributary of the Bighorn River, are located 7 miles west of Cody.

Authorization.—By the act of June 17, 1902 (ch. 1403, 32 Stat. 388), and the act of 1939 (ch. 418, 53 Stat. 1187).

Description.—Consists of Buffalo Bill Dam and Reservoir (439,800 acre-feet), Corbett diversion dam, Willwood diversion dam and appurtenant canal and lateral systems. The power division includes the Shoshone powerplant of 5,600 kilowatts, as well as the Heart Mountain powerplant of 5,000 kilowatts, and 163.4 miles of transmission lines connecting to the Missouri River Basin project transmission division system to the south and east. The primary purpose of the project is to provide a full water supply for the irrigation of 95,221 acres made up of four divisions: Garland, Frannie, Willwood, and Heart Mountain—of semi-arid land in the northwestern section of the State.

Benefit-cost ratio.—Construction started prior to establishment of requirements.

Summarized financial data

Estimated total obligations	$23,836,649
Total obligations to June 30, 1956	21,771,913
Total obligations, fiscal year 1957	565,736
Total obligations, fiscal year 1958	544,000
Balance to complete	955,000

On a cost basis the fiscal year 1958 program will total $574,733. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Changes in total project costs and obligations

	Costs	Obligations
1957 congressional justifications	$23,020,158	$23,222,648
1958 congressional justifications	23,628,111	23,836,649
Increase	607,953	614,001

The North Cody Bench and Ralston Flat pump areas, formerly included as a part of Shoshone extension unit in the amount of $667,000, were added to the program, and transitional development was reduced by $94,000; these amounts together with adjustments for actual costs and contributions to the civil-service retirement fund result in a net increase.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	[1] $17,413,291
Power (commercial power investment)	4,204,301
Subtotal, reimbursable	21,617,592
Nonreimbursable:	
Contributions	3,900
Chargeoffs (irrigation) [2]	2,006,619
Subtotal, nonreimbursable	2,010,519
Total	23,628,111

[1] Includes that portion of the Shoshone project water supply works that may eventually be allocated to the Shoshone extension unit, Missouri River Basin project.

[2] Shoshone project chargeoffs:

Act of May 25, 1926:	
Shoshone Irrigation District	$316,253
Deaver Irrigation District	1,228,876
Act of May 6, 1949: Willwood Irrigation District	9,843
Act of July 14, 1954: Shoshone Irrigation District	405,647
Estimtaed chargeoffs for nonirrigable lands authorized under Public Law 258	46,000
Total	2,006,619

Repayment of reimbursable costs

By irrigation water users	[1] $16,054,522
By power revenue:	
Commercial power investment	4,204,301
Irrigation investment	1,358,769
Total	21,617,592

[1] This figure may be reduced by that portion of Shoshone project water supply works that may eventually be allocated to the Shoshone extensions unit, Missouri River Basin project.

Repayment costs per acre

Federal irrigation investment per acre:	
To be repaid from water users	$169
To be repaid from power revenues	14
Total	183
Annual water users charges per acre:	
Construction (excludes Heart Mountain division)	1.84
Operation and maintenance	2.87
Total	4.71

Repayment contracts.—Construction repayment contracts for the completed Garland, Frannie, and Willwood divisions have been entered into and the operation and maintenance of these divisions was transferred to the irrigation districts during 1927, 1930, and 1949, respectively. The Heart Mountain division, Buffalo Bill Dam and Reservoir, Shoshone and Heart Mountain powerplants and their transmission systems are now operated by the Government. An irrigation district has been formed on the Heart Mountain division and negotiations for a repayment contract are under way. It is anticipated that the North Cody Bench and Ralston Flat pump areas will be covered by the Heart Mountain contract. The cost of modification work on the Buffalo Bill outlet works will be repaid from power revenues in accordance with the terms of the act of March 4, 1929 (45 Stat. 1592), and April 9, 1938 (52 Stat. 210).

Beginning July 1, 1952, the transmission division of Missouri River Basin project assumed the operation and maintenance of the transmission facilities of the Colorado-Nebraska-Wyoming interconnected system including those of Shoshone project, and does the marketing of the power, all as the agent of the various projects involved. Shoshone project continues to operate its own powerplants, and is credited with revenues annually for its production and transmission system investments by allocations of power sales revenues from Missouri River Basin project transmission division.

Physical data

Feature	Type	Capacity	Height	Length
			Feet	
Buffalo Bill Dam and Reservoir	Concrete arch	439,800 acre-feet	328	200 feet.
Shoshone powerplant (3 units)	Hydroelectric	5,600 kilowatts		
Heart Mountain powerplant (1 unit).	do	5,000 kilowatts		
Canals and conduits	Concrete or asphalt lined.	194 to 1,200 cubic feet per second.		139 miles.
Distribution system	Various	5 to 353 cubic feet per second.		570 miles.
North Cody Bench pump (2)	Outdoor	10 cubic feet per second		
Ralston Flat pump (2)	Indoor	23 cubic feet per second		

Acres to be served

Full supply (total irrigable)	95,221
Total	95,221

Status.—As of June 30, 1957, the project will be approximately 94 percent complete. Work will be underway on stabilization of canal banks, channel and structure protection of canals and laterals, settler assistance, drainage and extension of laterals to serve irrigable lands being amended to present farm units. Contract for modification of Buffalo Bill Dam is expected to be awarded the latter part of fiscal year 1957 and will continue through fiscal year 1958.

WORK PROPOSED, FISCAL YEAR 1958

Buffalo Bill Dam and Reservoir, $439,000.—Continue work on the repair and modification of the river outlet works of which $30,000 is for the construction of a new trashrack and riser over the power penstock inlet structure.

Heart Mountain division—Drains, $138,198.—Work will continue by contract on the construction of open and closed drains to prevent the seepage of lands. Minor force account drainage construction will continue as required.

Contributions to civil-service retirement fund, $8,100.—Initial year contribution to civil service retirement fund.

Transitional development, $13,102.—Provides post entry community service planning and technical guidance to new settlers.

Adjustments, —$23,667.—Nonappropriation transfer of prior investigation costs from Shoeshone extension unit applicable to North Cody and Ralston Bench areas and cost of administering Public Law 258.

Other expenditures and credits, —$30,773.—Represents cost of service facilities accrued in prior years which will be distributed to permanent property in the budget year.

DRAINAGE AND REHABILITATION

Chairman HAYDEN. The House recommended the allowance of the budget estimate of $893,000 for drainage and minor construction, and the budget estimate of $3,530,000 for the rehabilitation and betterment of existing projects.

If there are no questions or comments, I will insert this justification into the record.

(The justification referred to follows:)

DRAINAGE AND MINOR CONSTRUCTION PROGRAM

Summarized financial data

Total obligations, fiscal year 1957	$7,829,555
Total obligations, fiscal year 1958	[1] 1,728,827

[1] Includes $31,140 for contribution to civil-service retirement fund.

On a cost basis the fiscal year 1958 program will total $2,830,930. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Description.—The drainage and minor construction program consists of projects on which all major construction has been completed, except for facilities which are temporarily deferred, and relatively small amounts of funds are being requested in the budget year for drainage work, minor repair or replacement work, miscellaneous finishing activities, or preconstruction work on the temporarily deferred facilities.

Work proposed, fiscal year 1958.—The fiscal year 1958 program involves work on 13 projects and the preparation of completion reports and as-built drawings. Five of these projects are scheduled to be completed during the fiscal year.

All-American Canal system, California, $7,000

Description.—The primary purpose of the system is to provide a water supply to 530,000 acres in the Imperial Valley and 74,800 acres in the Coachella Valley, through works constructed entirely within the United States. Principal facilities of the system include Imperial Dam and desilting works and Laguna Dam on the Colorado River, the 80-mile All-American Canal, the 145-mile Coachella Canal, the Coachella Valley flood protective works, and the 450-mile concrete pipe distribution system serving the Coachella Valley.

Work proposed, fiscal year 1958.—This program financed with prior-year funds provides for continued review of Coachella Valley County Water District drainage plans by the office of the assistant commissioner and chief engineer in Denver and assistance to the district by regional personnel in drainage matters. Some activity continues in connection with the public-land settlement program.

Boulder City project, Nevada, $20,000

Description.—The townsite is about 2 square miles in area and has a population of about 4,000 persons. Originally constructed for the purpose of housing personnel working on Hoover Dam, the town now provides facilities for Government employees of the Bureau of Reclamation, the Bureau of Mines, and the National Park Service. The Department of Water and Power of the city of Los Angeles, and the Southern California Edison Co., which agencies operate the generating

equipment at Hoover Dam as agents of the United States, also have employees living in Boulder City.

In order to establish adequate facilities for a population of nearly 4,000, the city has provided a city management, police and fire protection, health and sanitation supervision, and maintenance departments for streets, sidewalks, and street lights; parks, lawn, and parkways; water and electric systems; public buildings; and Government-owned dwellings.

Work proposed fiscal year 1958.—In fiscal year 1958 it will be necessary to make minor extensions of the water, electric, and sewer systems within the existing developed area of the townsite as required and to purchase additional capitalized equipment as the need arises. Also, two blocks of existing dirt road on Avenue B, which carries considerable traffic, will be surfaced, and steel guard rails will be installed on a portion of Nevada Highway in the northern part of the townsite.

Buffalo Rapids project, Montana, $156,647

Description.—The first division consists of a pumping plant located on the Yellowstone River with a capacity of 330 second-feet, which provides a lift of 103 feet to irrigate 13,903 acres of land.

The second division consists of 3 units and a total of 9,422 irrigable acres. Water is pumped from the Yellowstone River by 4 pumping plants ranging in capacity from 40 to 105 second-feet.

Work proposed, fiscal year 1958.—The program provides for completion of drainage contracts awarded in fiscal year 1957 and award of additional drainage contracts. Completion of Fallon drains is scheduled.

Buford-Trenton project, North Dakota, $123,074

Description.—The primary purpose of the project is to provide full water supply to 10,642 acres of irrigable lands. Water is pumped from the Missouri River at a point near Buford, N. Dak. The pumping plant consists of 3 pumping units of 80 cubic cubic feet per second capacity against a lift of 31 feet. The project is operated by the Buford-Trenton Irrigation District.

Work proposed, fiscal year 1958.—Prior-year unobligated funds are available for replacement of trash racks at the Buford-Trenton pumping plant and repair and improvement to discharge line. Includes collection of design data, issue and award of contracts, and completion of the work. Funds will be used for collection of design data and award of contract to start minor completion work on the canals and conduits. Construction consists of replacing wood structures with concrete, including water inlets; provides purchase and installation of new gates and gages on many existing lateral headgates and over- and under-chutes pipe. Work on the laterals includes investigations as to specific requirements, collection of design data, award of contract for minor completion work, purchase of materials and start of construction. Farm road crossings will be built, new gates and gages installed at turnouts and over- and under-chutes placed. The program provides for award and start of minor completion construction on various drains.

Funds will be used for gathering design data, award and completion of contract for crosswater drainage protection, placing additional riprap protection to eroding spots on wasteways, canals, laterals and drains; increase height of some check structures and straighten slope and extend existing floodwater channel. Service equipment will be acquired for the irrigation district not initially provided while under construction.

Completion reports and as-built drawings, $20,000

Description.—Subsequent to completion of a project or a major segment thereof, it is necessary to prepare technical records of design and construction and as-built drawings for purposes of permanant records. These reports and drawings constitute the complete records of the final design and construction of project features and facilities, such as dams, powerplants, etc. These final records make available to Bureau engineers and others the procedures adopted and the experience gained in the planning, design, construction, and initial operation of the features or project. These records are of vital importance in cases of future alterations, rearrangements of machinery, emergency repairs, or replacements.

Work proposed, fiscal year 1958.—During fiscal year 1958, technical records of design and construction and as-built drawings will be prepared on completed separable features which have passed from the construction status to operation

and maintenance status before the necessary work of preparing these records could be completed.

Deschutes project, north unit, Oregon, $189,347

Description.—The primary purpose of the Deschutes project is to provide a full water supply for irrigation of 50,000 acres in the north unit through the use of Wickiup Reservoir, a main canal some 65 miles in length, and a lateral distribution system. The project also furnishes supplemental water to 48,448 acres in established irrigation districts from the reconstructed Crane Prairie Reservoir. Project facilities include the Crane Prairie and Wickiup Dams and Reservoirs, the Cove powerplant and diversion dam, the north unit main canal, a lateral and drainage system and the Hayrack equalizing reservoir.

Work proposed, fiscal year 1958.—The program provides for the payment of contract earnings and associated costs in connection with the completion of the Haystack dam and equalizing reservoir. Also included will be the payment of contract and related earnings to complete the construction of the district's office facilities which are to be initiated late in fiscal year 1957.

Klamath project, Oregon-California, $193,753

Description.—The primary storage facilities for the Klamath project consists of the upper Klamath Lake on Klamath River, Clear Lake Reservoir on Lost River, and Gerber Reservoir on a tributary of Lost River. These reservoirs serve over 217,000 acres of land, control the water level of lower Klamath and Tule Lakes and control floodwaters in Klamath and Lost Rivers. The releases from the upper Klamath Lake are diverted by the Link River Dam to serve the main division, lower Klamath Lake division, and a substantial acreage under Warren Act or special contracts or under lease or water rental. The releases of the Gerber Reservoir and the Clear Lake Reservoir are used for irrigation of land in the Langell division by diversion at the Malone and Miller diversion dams. Downstream from Langell Valley the Lost River diversion dam serves to divert excess water into Klamath River and controls the water level in Tule Lake and thus reclaims substantial acreage in the bed of Tule Lake. This reclaimed land is served by the Lower Lost River diversion dam. Return flows from irrigation are gathered in the Tule Lake sump and the excess is pumped into the lower Klamath Lake and alternately into the Klamath River.

Work proposed, fiscal year 1958.—Coppock Bay pumping facilities will be installed as specified in the contract with Tule Lake Irrigation District and preliminary design data will be secured for drainage and pumping facilities in sump area "G." Design data for the Klamath Straits unit drainage system will be completed. Contract negotiations with the Tule Lake Irrigation District and the transfer of operating facilities will be completed during the fiscal year.

Palo Verde diversion project, Arizona-California, $1,046,109

Description.—Consists of the Palo Verde diversion dam, a rock and earth fill structure on the Colorado River. The dam will provide diversion of river water into the irrigation system of the Palo Verde Irrigation District and will replace a temporary rock weir completed in 1945 which was required by the retrogression of the Colorado River.

Appurtenant works will include a spillway with a normal design capacity of 75,000 second-feet and canal headworks with a capacity of $1,800 second-feet. The project will also include construction of levees and drainage canals upstream from the dam to protect river botton lands in the Colorado River Indian Reservation against floods of 75,000 second-feet or less. On the Arizona side the levee will be nearly 22 miles long and on the California side about 8 miles. The project also includes a $500,000 loan, authorized by law, to the irrigation district for modification of its existing work to conform to the new dam.

Work proposed, fiscal year 1958.—The program provides for completion of all work on the diversion dam, drains, and levees during fiscal year 1958.

Rathdrum Prairie project, Hayden Lake unit, Idaho, $424,000

The project will furnish water to 315 acres through the reconstruction of the existing Hayden Lake pumping plant, elevated storage tower, and distribution system. Completion of this rehabilitation will also reestablish the supplemental water supply for 1,040 acres previously irrigated. The project is supplied with water by pumping from Hayden Lake.

Work proposed, fiscal year 1958.—The program provides for the completion of the Hayden Lake pumping plant, storage tank, and distribution system prior to delivery of irrigation water in the spring of 1958.

Rio Grande project-Elephant Butte power, and storage division, New Mexico, $38,000

Description.—The primary purpose of the Rio Grande project upon its initial authorization was to provide a full supply of irrigation water to the irrigable portion of the valley of the Rio Grande lying south of the Percha diversion dam and north of the Hudspeth County line in the State of Texas. The power system consists of one powerplant and switchyard at Elephant Butte Dam, and transmission lines and substations serving the towns of Truth or Consequences, Deming, Central City, Las Cruces, Alamogordo, Hollywood, Socorro, Belen, Willard, and Albuquerque, N. Mex., and El Paso, Tex., and the military establishments at White Sands Proving Ground, and Holloman Air Base in New Mexico.

Work proposed, fiscal year 1958.—Funds will be used in the defense of anticipated lawsuits under Private Law 767, approved July 1, 1956.

Riverton project, Wyoming, $127,000

Description.—The primary purpose of the project is to provide a full water supply for the irrigation of 64,516 acres of semiarid new lands. The project derives its water supply from Wind River and tributaries, having Bull Lake Reservoir as its principal storage and Pilot Butte Reservoir as supplemental storage. Water from Bull Lake is diverted at Wind River diversion dam.

The Pilot Butte powerplant has a capacity of 1,600 kilowatts and is interconnected with the Bureau of Reclamation's transmission system extending throughout Wyoming.

Work proposed, fiscal year 1958.—Two drainage contracts for Wyoming canal drains will be issued, awarded and construction completed during the year. The program provides for future-year capacity provisions and for settlers' assistance.

Savage Rapids Dam, fish-protective facilities, Oregon, $101,000

Description.—The primary purposes of the authorized fish facilities is to prevent the loss of fish at Savage Rapids Dam, an irrigation structure, on the Rogue River which is the route of the migratory salmon and steelhead. Two vertical-traveling fish screens, each approximately 10 feet by 32 feet in size, will be located on the right-abutment section of the dam at the intakes to the irrigation pumps. Facilities will be provided to bypass fish past the screens to the stream below the dam.

Work proposed, fiscal year 1958.—The fiscal year 1958 program provides for delivery of all Government-furnished materials, completion of foundation work, and placement of embeded metalwork.

Sun River project, Greenfields division, Montana, $82,000

Description.—The primary purpose of the Greenfields division, the initial features of which were completed in 1920, is to provide irrigation for 84,531 acres of land. The storage system of the Greenfields division consist of Gibson Dam and Reservoir on the North Fork of Sun River and the two off-stream reservoirs. Water is diverted below Gibson Reservoir to Pishkuns Canal leading to Pishkuns Reservoir. The water is then released to the Sun River slope canal for irrigation of the division.

Work proposed, fiscal year 1958.—The program provides for minor completion work on Gibson Dam and Reservoir, canals, and conduits based on the results of studies completed in fiscal year 1957. Included will be structure modifications, installation of new structures, and enlargement of canal sections to permit increasing the capacity of the canals. Construction of drains will be continued as studies point out the need for drainage of seeped areas.

Yakima project, Kennewick division, Washington, $303,000

Description.—The Kennewick division is the last division of the Yakima project to be developed from the water resources of the Yakima River. The primary purpose of the division is to provide a full water supply for 19,171 acres of land, of which 14,534 acres are undeveloped rangelands and 4,637 acres are presently irrigated by pumping from the Columbia Irrigation District's canal. Facilities of the division include the multipurpose power and irrigation features: Prosser diversion dam, Chandler Canal, Chandler power and pumping plant, Chandler switchyard, and the irrigation features: gravity main canal and wasteways, gravity and pump laterals, and Amon relift pumping plant. The project is designed to furnish a water supply for 19,171 acres of land and to have a hydroelectric powerplant of 12,000-kilowatt capacity.

Work proposed, fiscal year 1958.—This program provides for the completion of drainage facilities and winterizing of Prosser diversion dam headworks started in fiscal year 1957 and for facilities to intercept return irrigation flows on the southern end of the project to keep them from damaging presently irrigated lands. The fiscal year 1958 program will provide for additional excavation and diking along certain sections of the Yakima River channel between the Prosser diversion dam and Chandler powerplant wasteway. The purpose of this work is to provide a water channel for fish protection during periods of low river flows. Funds will be used for wildlife protective fencing the canal and lateral systems, necessary telephone service to the operator residence at the Amon relift pumping plant, the purchase of tools and equipment required for the water users for operation and maintenance and for minor completion work.

Other expenditures and credits, —$26,056

Represents costs for service facilities and stores which were incurred in prior years and will be distributed to facilities proposed for construction in fiscal year 1958.

Undelivered orders, —$1,076,047

Represents obligations for construction, material, supplies, services, etc., incurred in prior years which will be liquidated in fiscal year 1958.

Rehabilitation and Betterment of Existing Projects

Location.—The program for fiscal year 1958 embraces rehabilitation and betterment work on 11 reclamation projects located in 9 of the 17 Western States. The States in which work is proposed are: Arizona, California, Colorado, Idaho, Montana, Nebraska, Oregon, Washington, and Wyoming.

Authorization.—Rehabilitation and betterment work on existing projects was authorized by the act of October 7, 1949 (63 Stat. 724), amended by the act of March 3, 1950 (64 Stat. 11).

Description.—On older projects which have been in operation for many years, it has been found that many structures have far exceeded their useful life and are requiring an excessive maintenance program to continue operations. The deteriorated facilities also often result in inefficient use or loss of irrigation water. The needed repairs are in most instances beyond the ability of the water users to finance on a current basis. In addition, there have been many changes in land use, methods of irrigation, and types of crops raised and, to place these older projects on a basis comparable to those now being constructed, the facilities must not only be rehabilitated but also improved.

Summarized financial data

Estimated total obligations	$41,526,211
Total obligations to June 30, 1956	13,584,264
Total obligations, fiscal year 1957	3,633,487
Total obligations, fiscal year 1958	3,603,000
Balance to complete	20,705,460

On a cost basis, the fiscal year 1958 program will total $3,682,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Status.—As a result of surveys made in 1947–48, those operating projects most urgently needing rehabilitation and betterment assistance were selected for initial participation in the program. Nine projects received allotments from the first year's appropriation for this work in fiscal year 1949. Additional projects have been added from year to year as repayment arrangements have been completed and funds made available. On July 1, 1956, work was in progress on 13 projects, of which 4 will be completed by the end of the current fiscal year.

Work proposed, fiscal year 1958

Rehabilitation and betterment work will be continued on nine project during fiscal year 1958. Rehabilitation on two of these projects, the Huntley and Milk River projects in Montana, is scheduled for completion by the end of the fiscal year. The start of a proposed 2-year program will be undertaken on the Yakima project, Washington, and a 1-year program on the Arnold project, Oregon, will be initiated and completed during the year.

Arnold project, Oregon, $69,000.—This program provides for flume rehabilitation by the district under a contract proposed to be executed by July 1957.

Bitter Root project, Montana, $80,000.—The program provides for continuation of rehabilitation of the main canal of this project.

Boise project, Idaho, $1,185,000.—Rehabilitation of the New York Canal will be continued and a construction contract covering lining and stabilization of the canal will be awarded. The program provides for additional pump units to reclaim waste water on the Payette division.

Grand Valley project, Colorado, $181,000.—The program provides for urgently needed repairs to or replacement of the gates and appurtenant facilities of the diversion dam serving this project.

Huntley project, Montana, $50,000.—Rehabilitation of the diversion dam serving the Huntley project was begun in fiscal year 1957, with an allotment from the Bureau of Reclamation emergency fund. The work will be carried to completion during fiscal year 1958.

Milk River project, Montana, $240,000.—Work on modification of the Sherburne Lakes Dam outlet works by rehabilitating the outlet works and providing an emergency overflow spillway will be continued to completion.

Orland project, California, $75,000.—These funds will be used to continue the extensive program of lateral relining begun in fiscal year 1957.

Riverton project, Wyoming, $480,000.—Lining of canals and laterals, replacement of structures, construction of new drains, and rehabilitation of some existing drains will be continued.

Rogue River Basin project, Oregon, $169,000.—Work will be continued on replacement of canal structures and lining of intermittent reaches of the project canals.

Salt River project, Arizona, $1,003,000.—The program provides for lining one or both banks of main canals at critical locations totaling approximately 500,000 square feet, constructing 3 additional canal structures, lining approximately 25 miles of laterals with pneumatically applied mortar or unreinforced concrete, replacing approximately 8 miles of open laterals with underground concrete pipelines, and rehabilitating additional lateral structures.

Yakima project, Washington, $150,000.—It is anticipated that a repayment contract will be executed and approved during fiscal year 1957 so that work can be started promptly in fiscal year 1958 on construction of additional project drainage facilities.

Other expenditures and credits, $3,000.—Represents costs of stores and service facilities acquired in prior years that will be distributed to permanent property during fiscal year 1958.

Undelivered orders, $76,000.—Liquidation of prior years' contract obligations.

LOAN PROGRAM, DISTRIBUTION SYSTEM

Chairman HAYDEN. The House committee recommended that the budget estimate of $7,700,000 for the loan program for distribution systems be disallowed, and directed that $1.5 million of funds previously provided for the program be used to finance other projects.

The committee also recommended the inclusion of a provision in the bill to authorize the Bureau to enter into contracts with the districts contingent upon appropriations by Congress.

The Department is requesting restoration of $3,700,000 of the House reduction. I will include the justification in the record.

(The justification referred to follows:)

LOAN PROGRAM—DISTRIBUTION SYSTEMS

Location.—In Central Valley project and Solano project in central area of California.

Authorization.—Authorized under Public Law 130, 84th Congress, 1st session, as amended by Public Law 520, approved May 14, 1956.

Description.—Public Law 130 provides that irrigation districts may borrow interest-free Federal funds for the construction of irrigation distribution systems.

Summarized financial data

Estimated total obligations	$23,800,000
Total obligations to June 30, 1956	----------
Total obligations, fiscal year 1957	15,900,000
Total obligations, fiscal year 1958	7,700,000
Balance to complete	100,000

On a cost basis the fiscal year 1958 program will total $10,200,000. The narrative justification which follows explains the fiscal year 1958 cost program.

Status.—The Second Supplemental Appropriation Act of 1957 appropriated $12,700,000 to cover the loan requirements of the Solano County Water District for the construction of a distribution system. $3,400,000 of prior-year funds were made available for the Terra Bella Irrigation District system. During the current year plans for specifications will be prepared and the construction of the system initiated in fiscal year 1958. In Central Valley project three irrigation districts will have loan requirements as follows: Terra Bella in fiscal year 1957, and Porterville and Sausalito in fiscal year 1958. The estimated total and the annual programs include provision for the administrative and engineering expenditures made by the Bureau in connection with the distribution systems in the loan program.

LOAN REQUIREMENT, FISCAL YEAR 1958

Solano project

Solano Irrigation District, $5 million.—This amount is the estimated portion of the total loan requirements of $12,700,000 which will be required in fiscal year 1958. Estimated total advanced through fiscal year 1958, $5,700,000.

Central valley project

Terra Bella Irrigation District, $1,500,000.—This amount is the estimated portion of the total loan requirements of $3,400,000 which will be required in fiscal year 1958. Estimated total advanced through fiscal year 1958, $1,900,000.

Porterville Irrigation District, $1,300,000.—This amount is the estimated portion of the total loan requirement of $2,300,000 which will be required in fiscal year 1958. Estimated total advanced through fiscal year 1958, $1,300,000.

Sausalito Irrigation District, $2,400,000.—This amount is the estimated portion of the total loan requirement of $5,400,000 which will be required in fiscal year 1958. Estimated total advanced through fiscal year 1958, $2,400,000.

Undelivered orders, −$2,400,000.—Represents funds advanced to the irrigation districts in fiscal year 1957 which are being charged to the work in fiscal year 1958.

Schedule of construction program, fiscal years 1957 and 1958

LOAN PROGRAM—DISTRIBUTION SYSTEMS

Program item	Estimated total	Total to June 30, 1956	Program, current year 1957	Program, budget year 1958	Balance to complete
(1)	(2)	(3)	(4)	(5)	(6)
Construction program:					
Solano Irrigation District	$12,700,000	----------	$700,000	$5,000,000	$7,000,000
Terra Bella Irrigation District (Central Valley project)	3,400,000	----------	400,000	1,500,000	1,500,000
Porterville Irrigation District (Central Valley project)	2,300,000	----------	----------	1,300,000	1,000,000
Saucelito Irrigation District (Central Valley project)	5,400,000	----------	----------	2,400,000	3,000,000
Total construction cost	23,800,000	----------	1,100,000	10,200,000	12,500,000
Total project cost	23,800,000	----------	1,100,000	10,200,000	12,500,000
Adjustments	----------	$24,185	12,000	----------	−36,185
Total cost to appropriation	23,800,000	24,185	1,112,000	10,200,000	12,463,815
Total expenditures	23,800,000	24,185	1,112,000	10,200,000	12,463,815
Undelivered orders	----------	−24,185	14,788,000	−2,400,000	−12,363,815
Total obligations	23,800,000	----------	15,900,000	7,800,000	100,000
Method of financing:					
Allocation of appropriation fiscal year 1957	----------	----------	12,700,000	----------	----------
Application of prior year funds	----------	----------	3,400,000	200,000	100,000
Balance available in subsequent years	----------	----------	−200,000	−100,000	----------
Funds required	----------	----------	----------	7,700,000	----------

TOTAL AVAILABLE FOR LOANS

Chairman HAYDEN. How much has been made available for loans under this program?

Mr. DOMINY. We have not actually concluded any of the loan agreements as yet. However, the Solano contract is very nearly complete, and we will be in a position very shortly to obligate about $12,700,000 under that contract.

In addition, we have made substantial progress on the Terra Bella, Porterville, and Sausalito negotiations. We expect all of those to be concluded in the next fiscal year.

Chairman HAYDEN. In other words, these funds have been made available for specific loans?

Mr. DOMINY. They have been appropriated on the basis of completing these specific loan agreements, yes, sir.

SOLANO PROJECT LOAN

Chairman HAYDEN. How much was appropriated for the Solano project?

Mr. DOMINY. We asked in fiscal 1957 a total of $12,700,000 for Solano, and that was appropriated by action of the Congress last year.

Mr. GOLZÉ. In addition to that, there was $3,400,000 made available from unobligated balances last year for the Terra Bella in accordance with permission from this committee, the Appropriations Committee.

So we had a total of $16,100,000 of appropriated funds available for fiscal year 1957, for that work.

Chairman HAYDEN. How much of that did you spend?

Mr. GOLZÉ. There has been practically none of that money spent, because none of those loans have been processed through to completion.

Mr. DEXHEIMER. The only money to be spent would be charges for our work in connection with those projects.

I would like to point out to the chairman that the $12,700,000 in the case of Solano is for the full amount of the proposed loan.

HOUSE PROVISO

The House committee has now put in language which, if approved in the bill, would provide for annual partial payments on these loans rather than appropriating the full amount of the the loan at one request.

Now they provide that loans are to be made on a fiscal year basis.

Chairman HAYDEN. Is the budget estimate for specific loans?

Mr. GOLZÉ. Yes, sir. The budget estimate of $7,700,000 was to cover 2 loans, in the full amount, $2.3 million for Porterville and $5.4 million for Sausalito.

Chairman HAYDEN. In your opinion, is it feasible to handle this program as the House committee suggested?

Mr. DEXHEIMER. I think, Mr. Chairman, with appropriate language, modifying the original Public Law 130, that it would be feasible from our standpoint to handle it on an annual or fiscal-year appropriation basis. However, there might be some trouble on the part of the irrigation districts themselves if they were simultaneously getting funds through bonding capacity for other purposes, because

bonding companies are quite strict about any hitch in getting funds or any contingent matters. But as far as we are concerned, we see no particular difficulty in this.

Chairman HAYDEN. Could you take two bites of the cherry? How much would have to be made available to provide for the previously approved loans, and those presented in the budget on a partial-payment basis?

Mr. DEXHEIMER. The Solano contract is the only one presently approved. The $12,700,000 would cover the full amount of that contract. The others, Terra Bella, Porterville, and Saucelito, particularly, we think will be approved in the very near future.

Funds for those could be utilized in fiscal 1958 if they were available. However, the language of the House committe report would restrict us to only $1,900,000 for the Terra Bella project. We would have no funds for the others.

Chairman HAYDEN. I realize that the district is going to have trouble raising money if it is contingent upon appropriations year by year from Congress.

On the other hand, if they have a firm commitment from Congress that this is what they will do, then I think they could bond themselves more easily.

Mr. DEXHEIMER. I think, Mr. Chairman, their difficulties would only be in connection with other bond issues that they might be involved in at the same time. I don't believe that they would have any difficulty so far as carrying out their work under the loan program, financed on a fiscal year basis.

CONTINGENCY ON APPROPRIATION CLAUSE

Mr. DOMINY. But it is true that the proponents of Public Law 130, in testifying in favor of the bill to permit them to build their own distribution systems under a loan program, testified that in their judgment they could save as much as 20 percent just by eliminating the contingency on appropriation clause. If they could have a lump sum available for them to contract, without the usual Government procedure, they said they could save considerable money. Whether that is true or not, remains to be seen. But that was their testimony.

I think it is also true that under REA, FHA, and other Federal commitments for advancing funds for construction, they usually have this money in the bank at the time the loan is made, rather than being contingent on appropriations.

Chairman HAYDEN. It might be well for the record if you can cite the provisions of law in these other instances, like REA and other instances you have.

Mr. DOMINY. It is my understanding, Mr. Chairman, that under other loan programs where the Federal Government supplies money to various subdivisions of local government for construction purposes, such as REA or the FHA and other loans of that character, where the money comes from the Federal Treasury, that those agencies are not permitted, by law, to approve a loan until the money is actually available to them by appropriation in a lump sum.

PROVISIONS OF LAW

Chairman HAYDEN. It might be well for the record if you can cite lawyers to look up the provisions of law in these other instances, as many as they can find, and we will put it in the record.

Mr. DEXHEIMER. We will do that, Mr. Chairman.

(The information referred to follows:)

Revised Statutes, section 3732 (41 U. S. C. 11), prohibits the making of contracts on behalf of the United States unless authorized by law or under appropriations adequate to their fulfillment.

Title 31, United States Code, section 627, provides that no act of Congress shall be construed to make an appropriation or to authorize the execution of a contract involving the payment of money in excess of appropriations made by law unless such act in specified terms declares an appropriation to be made or that a contract may be executed.

In volume 16, Decisions of the Comptroller General, page 1007 (May 17, 1937), the Acting Comptroller General held that the provisions of law above referred to prohibited the making of loan contracts under the Rural Electrification Act in advance of the appropriation of funds out of which the loans could be made.

The statutory provisions cited would, under the reasoning of the Acting Comptroller General's decision, be equally applicable to loans undertaken under the Irrigation Distribution System Loan Act (Public Law 130, 84th Cong., as amended), in the absence of a provision in the nature of that included by the House Appropriations Committee in reporting out the public works appropriation bill for fiscal year 1958.

160-ACRE LIMITATION DECISION

Chairman HAYDEN. In view of the 160-acre limitation decision of the California courts, can you proceed with loans on the Porterville and Saucelito districts?

Mr. DEXHEIMER. At the present time, we are not quite sure, Mr. Chairman. As I pointed out this morning, in the case of the Corning Canal contract, the Securities Commission of California has now approved the revised contract.

But I don't know whether they would similarly approve these additional ones or not. Then, of course, there is the question of having them validated by the State courts.

In view of the California Supreme Court decision on the acreage limitation, we do not know whether that is going to be done by the California courts or not. However, we think that the Supreme Court of the United States will undertake a review of that California decision.

How quickly they might act in this matter is not known.

Chairman HAYDEN. In the meantime, you are just about at a standstill; is that right?

Mr. DEXHEIMER. I expect so, Mr. Chairman, until something is clarified.

Chairman HAYDEN. Is that what the House recommended?

CORNING CANAL CONTRACT

Mr. DEXHEIMER. Well, in the case of the Corning Canal, there were some subsequent actions that changed the picture from what they have in their report.

The Securities Commission has now approved that contract, and the district has indicated that they have hopes of getting the California courts to validate the contract.

They propose to present it to the California court shortly. That could be clarified very shortly if the California court would so validate it.

Chairman HAYDEN. The action, would that meet the objection that the House has raised?

Mr. DEXHEIMER. Yes, sir.

MISSOURI RIVER BASIN PROJECT

Chairman HAYDEN. The Missouri River Basin project is next. I will include the summary statements in the record, and we will proceed with the discussions of the various units and divisions of the project.

(The statements referred to follow:)

MISSOURI RIVER BASIN PROJECT

Location.—The project area is the entire drainage basin of the Missouri River. The basin contains approximately 529,000 square miles, or about one-sixth of the land area of the United States. It covers all or parts of the 10 States of Montana, North Dakota, South Dakota, Wyoming, Nebraska, Colorado, Kansas, Minnesota, Iowa, and Missouri. The last three named States are east of the area of Federal irrigation development.

Authorization.—By the Flood Control Acts of December 2, 1944 (58 Stat. 887), July 24, 1946 (60 Stat. 641), and May 17, 1950 (64 Stat. 170); and by special acts of July 16, 1954 (58 Stat. 891), August 21, 1954 (68 Stat. 757), May 2, 1956 (58 Stat. 891), May 18, 1956 (70 Stat. 160), and August 3, 1956 (70 Stat. 975). Refers to Senate Document 191, House Document 245, and Senate Document 247 all 78th Congress.

Description.—The project consists of a comprehensive basin plan being constructed jointly by the Bureau of Reclamation and the Corps of Engineers. The ultimate plan proposed contains more than 200 individual projects or units which will provide a coordinated system of reservoirs, canals and related works for the full development of the water resources of the basin. This basin, long subject to recurring floods and droughts, justifies the need for basinwide planning of a system of reservoirs for maximum irrigation, flood control, hydroelectric power, municipal and industrial water, navigation, recreation, and fish and wildlife conservation. In addition to the Bureau of Reclamation and the Corps of Engineers, other Federal agencies, including six in the Interior Department, are cooperating in the planning and development of the basin.

Benefit-cost ratio.—1.62 to 1.

Summarized financial data

Estimated total	[1] $2,945,579,000
Total obligations to June 30, 1956	475,407,555
Total obligations, fiscal year 1957	42,785,323
Total obligations, fiscal year 1958	44,563,734
Balance to complete	2,430,910,048

[1] Estimated Bureau of Reclamation project costs only. Excludes investigations by other agencies.

Change in total project cost

1957 congressional justification	$2,813,297,000
1958 congressional justification	2,945,579,000
Increase	132,282,000

The increase in total project cost is the result of refinement of the estimate based on current price index further studies and changes in the plan of development along with the addition of the Farwell unit which was reauthorized under Public Law 952, 84th Congress, 2d session.

Total estimated project cost and allocation

Total estimated project cost to be allocated	[1] $2,945,579,000

[1] Bureau of Reclamation only. Excludes costs of other agencies.

Allocation of total estimated project cost

Reimbursable:	
Irrigation	$2,100,057,000
Power	627,868,000
Municipal and industrial water	3,636,000
Recreation	4,861,000
Other	19,579,000
Subtotal	2,756,001,000
Nonreimbursable:	
Flood control	185,515,000
Fish and wildlife	3,063,000
Municipal water	1,000,000
Subtotal	189,578,000
Total	2,945,579,000

Repayment of reimbursable costs

By irrigation water users	428,476,000
By municipal and industrial water users	3,636,000
By power revenues, part only	2,323,889,000
Total	2,756,001,000

REPAYMENT COSTS PER ACRE

These data are presented in the justifications of the individual units.

Repayment.—The entire cost of the comprehensive project that is properly allocable to irrigation, commercial power, and municipal water will be repaid in accordance with reclamation law. Costs properly allocable to flood control, navigation, and fish and wildlife are nonreimbursable. Costs allocated to irrigation and in excess of the water users ability to repay, will be repaid from power revenues.

Physical data.—The portion of the Missouri River Basin project now authorized for construction by the Bureau of Reclamation comprises about 190 separate units and divisions. Development of these units and divisions will provide the following benefits:

Storage capacity	18,166,000 acre-feet.
Irrigation service to—	
Full supply	3,338,223 acres.
Supplemental supply	480,720 acres.
Installed power capacity	[1] 884,700 kilowatts.

[1] Bureau of Reclamation only. Excludes plants for construction by Corps of Engineers.

Status.—As of June 30, 1957, the units to be constructed by the Bureau of Reclamation, for which funds have been made available, will be approximately 53 percent complete. Twenty-seven units embracing 22 storage dams and 6 powerplants will either be completed or under construction. All or part of these units will be in operation by the end of the same fiscal year as a result of completion of construction to a point where 19 dams, 4 powerplants, and other facilities will be in use. Partial flood control has been achieved on several main tributaries, and actual irrigation will be underway on 10 units. The transmission grid has been advanced to market power now available and to be completed coincident with the completion of the Missouri River main-stem powerplants now under construction by the Corps of Engineers.

Work proposed fiscal year 1958.—The overall Missouri River Basin project fund request is outlined in the consolidated statement. Separate justifications follow for each division or unit to be in an active construction stage in fiscal year 1958, the Missouri River Basin investigations to be financed with construction funds, and other Department of Interior agencies participating in the basin development. Costs and program data for these separate activities are also presented on a supporting tabulation.

Fiscal year 1958 construction program, $38,438,734.—This program provides for initiation of construction on 3 units and continuing construction of 20 divisions

and units of which 9 are grouped into the drainage and minor construction category because of their relatively small programs. In addition, small amounts of funds are included in the drainage and minor construction category for completion reports and as-built drawings on functionally completed units for which construction funds are not available. The largest portion of the funds requested will be required to make payments on contracts for work now under construction or to be placed under contract as part of the approved program. Among the major features continuing are the Anchor Dam; the Freemont Canyon powerplant; the canal systems of the Bostwick and Frenchman-Cambridge divisions; the pumping plant, canal, and tunnel of the Helena Valley unit; and the power transmission grid, which is keyed to availability of power from mainstem Missour River powerplants.

Major features to be completed in fiscal year 1958 include the Kirwin unit irrigation facilities, Glendo unit dam and powerplant, Sargent Canal and appurtenant laterals, and the initial 230-kilovolt addition to Sioux Falls substation and 75,000 kilovolt-ampere addition to Sioux City substation. The irrigation distribution system will be started on the Webster unit; construction initiated on Dawson County-Bismarck 230-kilovolt transmission line; and construction of Yellowtail Dam will be started.

Preconstruction work will be active on the irrigation facilities of several units where reservoirs are completed or under construction.

Investigations, $3,000,000.—This program provides for continuing work on the development of plans leading to completion of the Bureau of Reclamation's work in the Missouri River Basin in an orderly fashion with the goal of optimum utilization of the basin's vast water and land resources. The fiscal year 1958 basin surveys program provides for continuation of surveys in 11 basins or subbasins, 4 of which will be completed by the end of the year and work will be resumed or initiated on 3 divisions. Unit investigations will be continued on 3 units and initiated on 3 additional units in fiscal year 1958. The advance-planning program provides for continued activities on 9 units with reports on 6 of these units scheduled for completion during the year.

Other Interior agencies, $3,125,000.—These funds will be allotted to 6 participating agencies for continuation of multipurpose development of the Missouri River Basin. While most of the funds expended are for direct benefit of the recipient agency in carrying out the Department of Interior's coordinated and comprehensive program for the development of land and water resources, some direct benefits are realized by the Bureau of Reclamation and the Corps of Engineers in the way of surveys and streamflow data. Activities to be continued under this heading include classification and inventory of public land by the Bureau of Land Management and evaluation of mineral resources by the Bureau of Mines. The Fish and Wildlife Service will continue studies with the construction agencies to see that proper wildlife protective facilities are incorporated in construction plans. The Geological Survey will collect and analyze basic data on water, land, and mineral resources and prepare maps and reports reflecting these data. The National Park Service is responsible for the comprehensive plan for conservation, development, and use of outdoor recreational and historical resources, while the Bureau of Indian Affairs will be responsible for custodianship and management of the tribes residing on Indian reservations.

AINSWORTH UNIT OF MISSOURI BASIN

Chairman HAYDEN. The House committee recommended the disallowance of the budget estimate of $1,100,000 for the initiation of construction of the Ainsworth unit of the Missouri River Basin project. The Department is seeking a restoration of the full reduction.

The justification will be placed in the record.

(The justification referred to follows:)

Location.—In north central Nebraska, with the storage works on the Snake River in Cherry County southwest of Valentine, Nebr., and approximately 14 river miles upstream from the confluence with the Niobrara River. The irrigable lands extend 22 miles from west to east and 14 miles from north to south beginning near Johnstown and continuing eastward to a point near Long Pine, all in Brown and Rock Counties.

Authorizations—This unit has been separately authorized as a part of the Missouri River Basin project under Public Law 612 (68 Stat. 757), 83d Congress

2d session, approved August 21, 1954. The feasibility report was approved by Public Law 531 (70 Stat. 160), 84th Congress, 2d session, May 18, 1956.

Description.—The primary purpose of the unit is to provide a full water supply for the irrigation of 33,960 acres of semiarid land in the north central section of the State. Facilities of the project include Merritt Dam and Reservoir, the Ainsworth Canal, three small pumping plants within the irrigable area, and laterals and drains. The Merritt Reservoir site is in the valley of the Snake River in eastern Cherry County, about 26 miles southwest of the city of Valentine. The Ainsworth Canal with an initial capacity 620 cubic feet per second will be 53 miles long (about 44 miles lined with concrete), fenced, and all excavated slopes seeded.

Benefit-to-cost ratio.—2.16 to 1.0.

Summarized financial data

Estimated total obligations	$25,722,000
Total obligations to June 30, 1956	[1]
Total obligations, fiscal year 1957	[1]
Total obligations, fiscal year 1958	1,100,000
Balance to complete	24,622,000

[1] Fiscal year 1957 and prior years financed with Missouri River Basin investigation funds.

On a cost basis the fiscal year 1958 program will total $826,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Allocation of estimated total project cost, $26,336,500

Reimbursable: Irrigation	$25,918,200
Subtotal, reimbursable	25,918,200
Nonreimbursable:	
Recreation	14,800
Fish and Wildlife	403,500
Subtotal, nonreimbursable	418,300
Total	26,336,500

Repayment of reimbursable costs

By irrigation-water users	$7,522,500
By Basinwide power revenues	18,395,700
Total	25,918,200

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$222.00
To be repaid from power revenues	541.00
Total	763.00
Annual water-user charges:	
Construction	5.54
Operation and maintenance	3.28
Total	8.82

Repayment contracts.—A combination 9 (d)-9 (e) contract was executed September 12, 1956, with the Ainsworth Irrigation District. This repayment contract under which it is estimated $7,522,500 will be repaid is similar generally to those with other irrigation districts in the Missouri River Basin project in region 7. Certification of irrigability of lands can be made without additional work or investigation.

Physical data

Feature	Type	Capacity	Height	Length
Merrit Dam and Reservoir	Earth	68,600	129 feet	2,000 feet.
Ainsworth Canal	Concrete lined and earth.	620 cubic feet per second.		53 miles.
Ainsworth laterals	Earth	Serves 33,960 acres		

Acres to be served

Full supply	33,960
Supplemental supply	None
Total	33,960

Status.—The report on the Ainsworth unit which was completed in March 1956 is of definite plan caliber. Collection of design data for Merritt Dam and Access road has been completed. Testing of some material for the dam has been finished.

WORK PROPOSED FISCAL YEAR 1958

Merritt Dam and Reservoir, $576,955.—The program provides for acquisition of rights-of-way, preparation of plans and specifications, and award of contract for the Merritt Dam and Reservoir and access road. By the end of fiscal year 1958 construction of these facilities should be well under way.

Ainsworth Canal, $141,400.—Field design data for about 53 miles of canal will be completed and preparation of plans and specifications will be started.

Ainsworth laterals, $75,400.—Program provides for obtaining field design data for lateral system to serve 33,960 acres.

General property, $10,000.—Purchase of office furniture and transportation equipment.

Transitional development cost, $4,400.—For cooperative agency assistance and direct development farm operation.

Contribution to civil service retirement fund, $28,700.—Initial year contribution to civil service retirement fund.

Adjustments, —$10,855.—Represents non-appropriation transfers of equipment and materials.

Other expenditures and credits, $274,000.—Field-office housing and other service facilities acquired in fiscal year 1958 the cost of which will be distributed to permanent property in subsequent years.

LOCATION OF PROJECT

Chairman HAYDEN. Where is this unit located?

Mr. BENNETT. That is located, Mr. Chairman, in north-central Nebraska, in the vicinity of the Niobrara River Basin.

Works would consist of the Merritt Dam and Reservoir on the Snake River, the Ainsworth Canal, and 3 small pumping plants, and necessary laterals and drains for approximately 34,000 acres of land.

Chairman HAYDEN. Was this unit specifically authorized or is it considered to be authorized under the Flood Control Act of 1944?

Mr. BENNETT. This unit was specifically authorized by an act of Congress of May 18, 1956. Congress passed two acts. The initial act, Mr. Chairman, was back in 1954, which gave us authority and directed us to make further investigations of units named in that act, one of which was the Ainsworth unit, and report back to Congress, which we did in 1956, and Congress approved it, on May 18, 1956.

It is a unit of the Missouri River Basin project.

Chairman HAYDEN. Give the committee the brief description of the unit.

Mr. BENNETT. I have outlined very briefly where the unit was located and the works involved.

TOTAL ESTIMATED COST

The total estimated cost is $26,336,500. Of that, practically all of it is allocated to irrigation. The amount is $25,918,200. Small allocations are made to recreation and fish and wildlife as nonreimbursable items.

The project water users would be expected to repay about $222 per acre over the repayment period. Power revenues from the Missouri River Basin project would be expected to pick up about $541 of the cost allocated to irrigation.

Chairman HAYDEN. What is the benefit-to-cost ratio.

Mr. BENNETT. The benefit-to-cost ratio is 2.16 to 1.

Senator DWORSHAK. Is that not $763 per acre rather a high cost?

Mr. BENNETT. The construction cost of $763 per acre? That is a little above the average, yes, sir.

Senator DWORSHAK. What kind of crops do they produce there, or would they produce?

Mr. BENNETT. They would produce corn, alfalfa, some cash crops, such as beans, sugar beets and potatoes, small grains, oats and barley.

Senator DWORSHAK. Is that being cultivated as a dry farming area now?

Mr. BENNETT. It is now being farmed as dry farming, with income derived principally from livestock and livestock products.

Senator DWORSHAK. Is there enough difference between the revenues currently from that land and what would be available under this project to justify such an expenditure?

Mr. BENNETT. We think there is, sir, and that is part of the difficulty that the House committee had. Our studies show that the increase in gross crop income in this project, as a result of irrigation, would be approximately $53.92 per acre. That is a gross increase.

Out of that amount must come, first, payments on the increased cost of production.

When you take off those costs, you arrive at a net increase of $8.82, which is the amount available to pay water charges. That $8.82 breaks down into $5.54 per acre payments on construction, and $3.20 estimated operation and maintenance cost per acre per year.

Senator DWORSHAK. How many acres are involved?

Mr. CROSTHWAIT. 33,960 acres.

Senator DWORSHAK. Would the present owners of that land operate if the project was built, or would that land be sold to GI's or other settlers?

EXCESS ACREAGE

Mr. BENNETT. There is some excess acreage in there now, and it is anticipated that those excess holdings would come within the reclamation law. Therefore, there will be opportunities for some settlers.

Senator DWORSHAK. How many acres are in that category of the new available land?

Mr. BENNETT. I am not sure I have that figure, Senator.

Mr. DEXHEIMER. I think, Senator Dworshak, most of the acreage would be operated by the present owners. It would only be that acreage above the land limitations entitled to receive water that would be available for dividing up and opportunities for additional farmers.

ONE HUNDRED SIXTY-ACRE LIMITATION

Senator DWORSHAK. Under the 160-acre regulations, though, a rancher who owns the land, and his wife and members of the family can each have 160 acres, can they not?

Mr. DEXHEIMER. Yes, sir.

Senator DWORSHAK. So they would have to have very large holdings now in order to be forced to divest themselves of some of the land if it is irrigated.

Mr. BENNETT. There are about 15,500 acres that are in ownerships of 160 acres or less, and about 44 ownerships with 9,800 irrigable acres within a size range of 161 to 320 acres. There are 17 ownerships representing 8,588 acres, which range in size from 321 to more than 800 acres each.

Those are the acres which would have to conform with the reclamation law, and, thereby, would become available for settlement.

Chairman HAYDEN. To what function is the nonreimbursable portion of the cost allocated?

Mr. BENNETT. There is a small amount of $14,800 allocated to recreation. There is $403,500 allocated to fish and wildlife.

Chairman HAYDEN. Have you a repayment contract?

Mr. DOMINY. Yes, sir. We have a repayment contract executed.

BOSTWICK UNIT

Chairman HAYDEN. The House committee recommended the allowance of the budget estimate of $1,471,000 for the Bostwick unit.

If there are not any questions from the committee, I will insert the justification in the record.

(The justification referred to follows:)

MISSOURI RIVER BASIN PROJECT—BOSTWICK DIVISION, NEBRASKA-KANSAS

Location.—In south-central Nebraska and north-central Kansas, extending from Harlan County Dam to Concordia, Kans., along the Republican River through Franklin, Webster, and Nuckolls Counties in Nebraska and Jewell, Republic, and Cloud Counties in Kansas.

Description.—Consists of a multiple-purpose project to provide irrigation, regulation of stream runoff for flood control in the lower Republican and Kansas River Basins, fish and wildlife conservation, and recreation. Facilities of the project include Harlan County Dam and Reservoir (U. S. Corps of Engineers) with a total storage capacity of 850,000 acre-feet, Lovewell Dam and Reservoir with a total storage capacity of 94,200 acre-feet, 2 diversion dams, pumping systems, canals, laterals, drains, and floodway channels for irrigation of 86,240 acres of rich bottom and table lands.

Benefit-cost ratio.—1.5 to 1.0.

Summarized financial data

Estimated total obligations	$48,449,860
Total obligations to June 30, 1956	27,738,337
Total obligations, fiscal year 1957	4,937,523
Total obligations, fiscal year 1958	1,471,000
Balance to complete	14,303,000

On a cost basis the fiscal year 1958 program will total $1,471,000, which is explained by the following narrative justification.

Change in total project costs and obligations

	Costs	Obligations
1957 Congressional justification	$48,969,000	$48,584,249
1958 Congressional justification	48,591,209	48,449,860
Decrease	377,791	134,389

The total estimated cost of the Bostwick Division has been decreased from $48,969,000 to $48,591,209. This change resulted from price index increase—re-estimate of rights-of-way, contract earnings and indirect costs, bid price and minor adjustments. The total was also affected by an increase due to the addition of contribution to civil service retirement fund, which offset, in part, the decrease.

Allocation of total estimated project cost

Reimbursable:	
Irrigation	$46,134,000
Recreation	37,000
Subtotal	46,171,000
Nonreimbursable:	
Flood Control	2,396,209
Fish and Wildlife	24,000
Subtotal	2,420,209
Total	48,591,209

Repayment of reimbursable costs [1]

By irrigation water users	$14,623,000
By surplus basin-wide revenue	31,548,000
Total	46,171,000

Repayment costs per acre

Federal investment per acre: [1]	
To be repaid by water users	$170.00
To be repaid by surplus basin-wide revenues	365.00
Total	535.00
Anual water user charges:	
Construction	4.30
Operation and maintenance (current prices)	4.15
Total	8.45

[1] Allocations and repayment exclude Harlan County Dam and Reservoir (U. S. C. E.) cost of $45,232,000, which provides a water supply for 76,240 acres of project lands. That cost is tentatively allocated: Flood control, $33,927,000; irrigation, $11,249,000; power, $35,000; and recreation, $21,000. Also excluded is an amount of $381,000 of basin-wide, noninterest bearing, power investment which is suballocated to irrigation because of use of basin pumping energy.

Repayment contracts.—Contracts have been executed with the Nebraska-Bostwick District and with the Kansas-Bostwick Irrigation District No. 2. The Nebraska-Bostwick District contract has been amended to increase the construction obligation. It is anticipated that similar amendments will be negotiated with the Kansas-Bostwick District in view of cost plan changes. Contract negotiations will be required for the Scandia area in Kansas before irrigation development can be initiated.

The Nebraska-Bostwick contract provides for the construction repayment on distribution works of $3,105,000. An additional $900,000 is specified in the contract to cover future drains to be constructed by the irrigation district as needed, or, upon the district's failure to do so, the Government may construct these drains and increase the obligation accordingly. The Kansas-Bostwick contract (to be modified in the future) stipulates the payment of $3,500,000 on the distribution system. Both contracts provide for relatively small payments on supply works through water service charges.

Physical data

Feature	Type	Total capacity	Structural height	Length
			Feet	*Feet*
Lovewell Dam and Reservoir	Earth fill	[1] 94,200	93	8,500
Superior-Courtland diversion dam	Concrete and earth	[2] 42,000	[3] 7.55	[4] 420
Scandia diversion dam	do	[2] 70,500	[4] 10	[4] 1,120

[1] Acre-feet.
[2] Cubic feet per second.
[3] Hydraulic height.
[4] Concrete weir.

Acres to be served

Full supply	86,240
Supplemental supply	0
Total	86,240

Status.—Construction began March 1949. As of June 30, 1957, the Bostwick division will be approximately 71 percent complete. Construction is essentially completed on the irrigation facilities in Nebraska, with only minor construction plus some possible drainage construction to be completed. As of June 1957, Lovewell Reservoir and the Courtland fourth section will be completed. Construction will be initiated on the Courtland 5A, Miller, and West systems. The accumulation of design data will be completed on the Courtland 5B, White Rock, and White Rock extension systems with design data being started on pumping plant 1 and 2 systems.

WORK PROPOSED, FISCAL YEAR 1958

Franklin distribution system, drains, and floodway channel, $161,868.—A contract will be awarded and work will be completed on the construction of pump turnouts along Franklin Canal as well as laterals to serve lands that will receive flood protection. Specifications will be prepared and contract awarded for construction of farm-outlet drains.

Naponee distribution system, drains, and floodway channel, $8,400.—The program provides for the preparation of designs and specifications and award of contract for construction of pump turnouts along canal and the continued construction of farm-outlet drains.

Franklin south side pumping plant, distribution system, and drains, $18,000.—Preparation of specifications will be initiated during the first half of the year, with start of construction scheduled in the third quarter for farm-outlet drains.

Superior distribution system, drains, and floodway channels, $33,000.—A contract will be awarded for construction of pump turnouts which will be completed during the year. Laterals required to serve lands that will receive flood protec-

tion will be completed and construction of farm-outlet drains will be initiated.

Courtland distribution system, laterals, drains, and floodway channels, $1,004,732.—The program provides for construction to continue on the main Courtland Canal, completion of prime contract on Miller Canal, completion of sections 1 and 2 of West Canal, and preconstruction work on White Rock Canal and extension. Construction will be completed on several sections of laterials and initiated on new sections and extensions to serve additional land. Specifications will be prepared and contract awarded for construction of farm-outlet drains.

General-service equipment, $120,000.—The program provides for the initial purchases of general-service equipment for the Nebraska-Bostwick and the Kansas-Bostwick Irrigation Districts.

Lovewell cooperative development, $19,000.—This program provides for wildlife habitat replacement in Lovewell Reservoir area.

Transitional development cost, $67,000.—This represents $11,000 for settlers' assistance and $56,000 for future year capacity provisions.

Contribution to civil-service retirement fund, $39,000.—Initial-year contribution to civil-service retirement fund.

CEDAR BLUFF UNIT

Chairman HAYDEN. The House committee also recommended the disallowances of the budget estimate of $50,000 for the Cedar Bluff unit, and the Department is asking for its restoration. I will insert the justification in the record.

(The justification follows:)

MISSOURI RIVER BASIN PROJECT—SMOKY HILL DIVISION, CEDAR BLUFF UNIT, KANSAS

Location.—In west central Kansas in Trego and Ellis Counties. The Cedar Bluff Dam and Reservoir is located on the Smoky Hill River approximately 18 miles southwest of the town of Ellis in Trego County. Project lands extend east from Cedar Bluff Dam for approximately 18 miles along the north side of the Smoky Hill River.

Description.—Consists of Cedar Bluff Dam and Reservoir, which has a storage capacity of 377,000 acre-feet, Cedar Bluff pumping plant, and Cedar Bluff Canal, laterals, and drains. The Cedar Bluff Canal will irrigate 11,300 acres of farmland.

Benefit-cost ratio.—1.6 to 1.

Summarized financial data

Estimated total obligations	$18, 862, 321
Total obligations to June 30, 1956	13, 794, 051
Total obligations, fiscal year 1957	98, 970
Total obligations, fiscal year 1958	50, 000
Balance to complete	4, 919, 300

On a cost basis, the fiscal year 1958 program will total $50,000, which is explained in the following narrative justification.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$18, 716, 000	$18, 679, 232
1958 congressional justification	18, 895, 682	18, 862, 321
Increase	179, 682	183, 089

The estimated cost of the Cedar Bluff unit has been increased from $18,716,000 to $18,895,682. This change resulted from increased indirect costs, a reduction for operation and maintenance equipment, and provision for contribution to civil service retirement fund.

Allocation of estimate total project cost

Reimbursable:	
Irrigation	$10,561,300
Recreation	4,400
Subtotal	10,565,700
Nonreimbursable:	
Flood Control	8,313,382
Fish and wildlife	16,600
Subtotal	8,329,982
Total	18,895,682

Repayment of reimbursable costs

By irrigation water users	$1,873,000
Repaid by surplus basinwide revenues	8,692,700
Total	10,565,700

Repayment costs per acre

Federal investment per acre:	
To be repaid by water users	$166.00
To be repaid by surplus basinwide revenues	769.00
Total	935.00
Annual water user charges:	
Construction	4.30
Operation and maintenance (current prices)	3.98
Total	8.28

Repayment contracts.—No contract has been negotiated. An irrigation district was organized in October 1949 and later dissolved in December 1955 as a result of adverse sentiment concentrated in the lower half of the project area. Consideration is now being given to the reduction in the scope of development to about 6,000 acres in the upper half of the unit where there is good evidence of favorable sentiment for development. Efforts are being made by local sponsors to form a new irrigation district covering the upper area. Russell, Kans., is now being provided with a municipal water supply from Cedar Bluff Reservoir under a temporary water service contract on an interim basis until a firm plan is established.

Physical data

Feature	Type	Capacity	Structural height	Length
Cedar Bluff:				
Dam and Reservoir	Earth fill	377,000 acre-feet	202 feet	12,560 feet.
Pumping plant	11-foot lift	202 cubic feet per second.		
Canal	Earth	210 cubic feet per second.		22.9 miles.
Laterals	do	11,300 acre-feet		38.1 miles.
Drains	do			13.0 miles.

	Acres to be served
Full supply	11,300
Supplemental supply	0
Total	11,300

Status.—Construction began on Cedar Bluff Dam on April 1, 1949. The dam has been completed. As of June 30, 1957, modification of the outlet works will be required when delivery of water is required for use on the project lands. Investigations will be in progress throughout the year on the irrigation system to obtain data for use in the definite plan report for the irrigation system which is scheduled for completion in fiscal year 1958.

WORK PROPOSED, FISCAL YEAR 1958

Cedar Bluff Dam and Reservoir, $2,000.—The program provides for compilation of field data and preparation of plans for the outlet works modification.

Cedar Bluff pumping plant, $2,000.—The program provides for compilation of field data and preparation of plans for the Cedar Bluff pumping plant.

Cedar Bluff distribution system and drains, $38,700.—The program provides for the preparation of plans and the accumulation of field data for the Cedar Bluff Canal, laterals, and drains.

***Transitional development costs, $5,000.*—This amount is programed for settler's assistance costs.**

***Contribution to civil-service retirement fund, $2,300.*—Initial year contribution to civil-service retirement fund.**

PLANNING FUNDS

Chairman HAYDEN. I will ask you whether these funds are for construction or planning.

Mr. DEXHEIMER. Those funds were requested for planning. Apparently, there was a misunderstanding on the part of the House committee. We are not planning to start construction until such time as the irrigation district is formed and we are reasonably assured of a repayment contract.

But we do need funds for carrying on the planning for the revised irrigation district.

Chairman HAYDEN. Is it desirable to do this planning work in the fiscal year 1958?

Mr. DEXHEIMER. Yes, sir, it is, and that irrigation district formation is fairly well along. There is quite a marked amount of interest in there because of recent growth in drought and water conditions.

FARWELL UNIT

Chairman HAYDEN. The House committee recommended the disallowance of the budget estimate of $750,000 for the initiation of construction of the Farwell unit. The Department is seeking restoration of this.

I will include the justification in the record.

(The justification follows:)

Location.—In central Nebraska in Sherman and Howard Counties. The Arcadia diversion works will be located on the Middle Loup River about 8½

miles upstream from the town of Arcadia. Sherman Dam will be constructed on Oak Creek, approximately 23 miles southeast of the diversion works and 5 miles northeast of Loup City. Project lands extend generally southeast from Sherman Dam in a quarter-circle area formed by the Middle Loup River to its juncture with the North Loup River. The irrigable area has a width of about 22 miles and a north-to-south depth of some 14 miles.

Description.—Water will be diverted from the Middle Loup River into the Sherman feeder canal for conveyance to Sherman Reservoir, capacity 69,100 acre-feet, for regulated releases to 3 main canals, laterals, and 1 large and 24 small pumping plants. The irrigable area is 52,530 acres. The plan includes necessary irrigation drainage systems and funds for improvement and protection of natural drains and channels against erosion. This latter work will be performed by the Soil Conservation Service with funds transferred to it for that purpose.

Benefit to cost ratio.—1.66 : 1.

Summarized financial data

Estimated total obligations	$31,974,000
Total obligations to June 30, 1956	[1] 0
Total obligations, fiscal year 1957	[1] 0
Total obligations, fiscal year 1958	750,000
Balance to complete	31,224,000

[1] Fiscal year 1957 and prior years financed with Missouri River Basin investigations funds.

On a cost basis the fiscal year 1958 program will total $745,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$32,425,500
Recreation	56,500
Subtotal, reimbursable	32,482,000
Nonreimbursable:	
Flood control	266,000
Fish and wildlife	883,000
Subtotal, nonreimbursable	1,149,000
Total	33,631,000

Repayment of reimbursable costs

By irrigation water users	$10,155,000
By basinwide power revenues	22,327,000
Total	32,482,000

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$193
To be repaid from power revenues	425
Total	618
Annual water user charges: [1]	
Construction	4.50
Operation and maintenance	3.60
Total	8.10

[1] Exclusive of tax proceeds from reclamation district.

Repayment contracts.—Drafts of repayment contracts have been prepared and preliminary negotiations initiated with the reclamation district and the two irrigation districts. This will involve new contracts with the Loup Basin Reclamation District and the Farwell Irrigation District and an amendatory contract with the Sargent Irrigation District. It is anticipated that these interrelated contracts will be executed before the beginning of the 1957 irrigation season.

The Farwell Irrigation District and the Sargent Irrigation District are within the boundaries of the Loup Basin Reclamation District. It is anticipated that interrelated contracts will be negotiated with all three districts wherein the irrigation districts will pay certain costs associated with the construction, operation, and maintenance of the distribution and drainage works and the overall reclamation district will pay costs associated primarily with the construction, operation, and maintenance of the water supply works.

Physical data

Feature	Type	Capacity	Height	Length
Sherman Dam and Reservoir	Earth	[1] 69,100	[2] 96	[2] 4,550
Arcadia diversion works	Concrete overflow section, radial gates, earth dike.		[2] 20	[2] 525
Sherman feeder canal	Earth and tunnel	[3] 850		[4] 18.1
Farwell main and Farwell lower main canal	Earth	[3] 910–65		[4] 37.0
Farwell central canal	do	[3] 135		[4] 18.8
Farwell south and Farwell upper south canals.	do	[3] 320–90		[4] 29.9
Farwell lateral system		[5] 52,530		
Farwell subsurface drains				[4] 7.5

[1] Acre-feet.
[2] Feet.
[3] Cubic feet per second.
[4] Miles.
[5] Acres.

Acres to be served

Full supply	52,530
Supplemental supply	0
Total	52,530

Status.—The report on the Farwell unit is of definite plan caliber and was approved by the Commissioner in June 1956. Only a small amount ($20,048) has been included in the fiscal year 1957 Missouri River Basin investigation program to permit negotiation of repayment contracts and power interference studies prior to initiating construction in fiscal year 1958.

WORK PROPOSED, FISCAL YEAR 1958

Sherman Dam and Reservoir, $408,800.—The program provides for initiating acquisition of rights-of-way for the dam, collection of design data for the dam, county road, and power line relocations and the caretaker's residence. Final designs and specifications will be completed and construction will be started on the dam and related relocation work.

Arcadia diversion works, $90,000.—These funds will be used for the collection of design data and for initiating preparation of final plans and specifications for the diversion dam.

Sherman feeder canal, $150,000.—The program provides for completing the collection of design data and preparation of final plans and specifications looking toward award of the construction contract in fiscal year 1959.

Farwell distribution system and drains, $100,000.—Collection of field design data will be initiated during the fiscal year looking toward award of construction contract for the Farwell main and lower main canal in fiscal year 1959.

Contribution to civil service retirement fund, $11,200.—Initial year contribution to civil service retirement fund.

Adjustments, —$15,000.—Nonappropriation transfers, prepayments, and other minor transactions which affect costs but not appropriations.

Other expenditures and credits, $5,000.—Cost of service facilities to be distributed to permanent features in future years.

AINSWORTH UNIT

Mr. BENNETT. Could I back up just for a moment to the Ainsworth unit and clear up some figures there on which there seems to be a great misunderstanding. I even quoted a wrong figure myself a minute ago.

The value that the House committee has used of $53.92 is actually total benefits. It is not increase in gross farm income. The increase in gross farm income is $82.75. So, when you subtract from that your increase in production costs of $59.51, you get a net increase in farm income of $23.24.

You take out of that a reasonable increase in farm living costs. You then arrive at the $8.35, which is the estimated payment capacity, or the amount available to meet water charges including the operation maintenance and replacement costs on project facilities.

Senator DWORSHAK. Is it not accurate for the House to report that more than 70 percent of the repayment is to be made up from the Missouri Basin power revenues?

Mr. BENNETT. That is correct. The figure that is really in error is the $53.92.

Mr. DOMINY. Let me interrupt a moment.

The House, Senator Dworshak, referred to 70 percent of the water users payment ability. They have used a repayment figure which is not correct. We are getting slightly more than 100 percent of the water users estimated payment capacity in this repayment contract, because our own studies indicate that they can only pay $8.35 an acre, and they have contracted to repay $5.54 per acre plus the project operation maintenance and replacement costs, currently estimated at $3.28—a total of $8.82.

Senator DWORSHAK. How much will come from power revenues, then?

Mr. DOMINY. Well, about 70 percent of the costs allocated to irrigation will be repaid by power.

Senator DWORSHAK. What is that in dollars?

Mr. BENNETT. The power revenues pay $541 and the irrigators pay $222. Your total is $763 per acre.

Senator DWORSHAK. That is even higher than the cost of reclaiming land in the Columbia-Grand Coulee project, is it not?

Mr. BENNETT. Yes, sir; it is higher.

Senator DWORSHAK. Does this set an all-time high record?

Mr. BENNETT. No. There are many projects higher than this in terms of construction cost per acre. This is above the average, but it is not the highest, by any means.

FARWELL UNIT

Chairman HAYDEN. We will go back now to Farwell unit, which was disallowed by the House. You are asking to have it restored. I have included the justification in the record.

Where is this Farwell unit located?

Mr. BENNETT. The Farwell unit is located in central Nebraska. Its principle features consist of a division dam into an off-stream reservoir, followed by necessary distribution works.

The irrigable area consists of 52,530 acres. The benefit-cost ratio, as we compute it, is 1.66 to 1.

Chairman HAYDEN. In the House report, they put the ratio at .53 to 1.

Mr. BENNETT. Yes, sir. That is a ratio that you can arrive at by using what we call direct benefits only, and a 50-year period of analysis. That is one of the calculations in our planning report on this project and one of the things required by Budget Circular A–47.

DIFFERENCE BETWEEN DIRECT AND INDIRECT BENEFITS

Chairman HAYDEN. Will you explain the difference between a direct benefit and an indirect benefit?

Mr. BENNETT. Frankly, we like to speak in terms of total benefits, but we do break them down. The direct benefits, speaking very broadly, are those which accrue to the farmer himself. Indirect benefits are those which accrue to the surrounding community, and to others as a result of the irrigation development.

Chairman HAYDEN. I can illustrate that in Arizona. If we had not had the irrigation development in the Salt River Valley, we would not have had the enormous increase in population in the city of Phoenix. The two things go together.

Senator DWORSHAK. Mr. Chairman, I would like this point cleared up.

On the Ainsworth project you said about 70 percent of the reimbursable costs would come from power revenue, but that the benefit to cost ratio was 2.16 to 1. Then, in the House report on the Farwell unit, we find that the budget request of $750,000 for this new construction start has been disallowed principally on the basis that the benefit-cost ratio when figured on the criteria established by the Bureau of the Budget is only 0.53 to 1. That is only about ½ to 1.

In addition, the power revenues of the Missouri River Basin project are expected to carry more than 60 percent of the repayment costs applicable to irrigation. So, when 60 percent of the repayment cost comes from power revenues, the benefit to cost ratio is 0.53 to 1.

But when 70 percent of the repayment cost comes in from power in the case of the Ainsworth unit, the benefit to cost ratio is 2.16 to 1, or about 5 times higher.

Mr. BENNETT. I will try and clear that up for you, Senator. There is no relationship between benefit-cost analyses and power revenues that are used to assist irrigation.

Your irrigation benefits or your total project benefits are computed, irrespective of who or what pays for the project. They are measured in terms of value to whomever the benefits accrue, even to the Nation as a whole.

That is regardless of repayment. You can have, as witness all flood-control projects, benefit-cost ratios greater than 1 to 1 without a dollar of repayment. The fact that you get repayment on an irrigation project, I think, is simply something to be thankful for—that you get back part of the money that you invest in the project.

WEALTH CREATING PROJECTS

Chairman HAYDEN. In a river and harbor project or flood-control project, we look into the benefits that accrue generally, by the increase in wealth. That is to say, if you would dredge the harbor of Norfolk, Va., so that the big tankers can get in, unload and get out quickly, that makes it possible to deliver the cargo of oil and deliver more cargoes per year in that part, therefore, oil is cheaper to those who have to have it and it is reflected in the price to the consumer. You have created, in other words, an opportunity to make a profit and that profit is taxed by the Federal Government.

We illustrate in the Salt River project by saying that the total original cost of the project has been paid a long time ago, but since 1937 the Federal Government has collected in Maricopa County $600 million in Federal revenues.

That somewhere comes into the benefits-cost ratio, and it should properly do so, I believe. If it is a wealth-creating project, and the wealth actually is created, and then becomes taxable, the Treasury of the United States gets its money back.

I do not doubt at all, so far as the cost of Boulder Dam is concerned, that the full cost of that dam has been paid over and over again. If you look at the increased revenue that has been collected in the Los Angeles collector's office by reason of the fact that cheap power came into Los Angeles before the war, and it enabled industries to develop and prosper.

Mr. DEXHEIMER. We would like very much to be able to include those things in our analysis of the benefit-cost ratio, Mr. Chairman. Unfortunately, there is not included the returns to the Federal Government through Federal taxes and those things. The things that we include are the direct benefits to the people who will get the water on the projects, and then a little less direct benefits to the immediate surrounding area.

BUDGET BUREAU DIRECTIVE

We think it is entirely proper to include those as overall benefits rather than as the House committee points out here, the Bureau of Budgets requirements, which limit you to including only those direct

benefits to the immediate farmer who gets the water, and limited to a 50-year period.

That is the difference in the analyses of the benefit-cost ratio. We also include those overall figures of the benefits to the Nation in a separate analysis, but we are not permitted to include those in the benefit-cost ratio calculation specified in Budget Circular A–47.

Senator DWORSHAK. Do you consider the potentialities of increasing the production of such crops as wheat, corn, sugar beets, which currently have production and marketing allocations and restrictions as you visually look at the increased value of projects like Ainsworth.

Mr. DEXHEIMER. We are very seriously considering those things, Senator Dworshak, and we find that when you get into irrigation and irrigated crops, even though they may raise some corn and some wheat, they do it for livestock feed rather than for marketing under the general marketing conditions of surplus crops. A very, very small percentage of crops grown on irrigated projects go into that surplus market.

Senator DWORSHAK. I know that is generally true, but I was just inquiring whether the Bureau does consider that phase of the current difficulty in preventing the piling up of surplus farm commodities.

Mr. DEXHEIMER. We do. We cover that very thoroughly in our legislative hearings on each project that we have sought authorization on recently. In the case of the upper Colorado project, for example, there is a limitation where we are not permitted to deliver water where surplus crops, basic surplus crops, are to be raised unless and until the Secretary of Agriculture determines they are no longer in surplus.

Senator DWORSHAK. Thank you.

TOTAL ESTIMATED COST

Chairman HAYDEN. What is the total estimated cost of this unit?

Mr. BENNETT. The total estimated cost of the Farwell unit is $33,631,000.

Chairman HAYDEN. How much of the cost is allocated to reimbursible functions and how much to nonreimbursable functions?

Mr. BENNETT. Allocated to reimbursable is $32,482,000, to nonreimbursable functions $1,149,000.

Chairman HAYDEN. What are the nonreimbursables?

Mr. BENNETT. Nonreimbursables in this instance are flood control and fish and wildlife.

Chairman HAYDEN. How much of the total cost allocated to irrigation is to be repaid from power revenues?

Mr. BENNETT. The cost per acre is $618. Of that, power is to pay back $425 per acre and the water users, $193 per acre.

Chairman HAYDEN. Was it not the intent of the authorizing legislation to have power revenues to help meet the cost of irrigation in order to have a full development of the resources of the basin?

Mr. BENNETT. That was the intent, Mr. Chairman.

Chairman HAYDEN. That is my recollection.

Mr. BENNETT. This project, although in the Missouri Basin and a part of the Missouri River Basin project, was specifically considered and authorized by Congress.

REPAYMENT CONTRACT

Chairman HAYDEN. How about your repayment contract?

Mr. DOMINY. Yes, sir. We have that completed. It was finally signed on March 23, 1957, and it is with a Loup Basin Reclamation District, which was a special district created by the Nebraska Legislature to spread this payment ability to include the assessed valuation of the town, the city property, as well as the farm property.

That includes both the Sargent and the Farwell units all under one master contract. It is a very favorable contract, one of the best that we have, I think.

LAND USE

Senator DWORSHAK. What is that land being used for now?

Mr. DOMINY. That land is used in dry-land corn and wheat at the moment.

That is something that ought to be said here for the record. This is a feast and famine kind of economy at the moment. When the rains come, they do well and when the rains do not come, they are in trouble.

The Federal Government has continually over the years put a certain amount of relief money into this type of high-risk agriculture.

Senator DWORSHAK. If they put it into the soil bank, they could retire it, could they not?

Mr. DOMINY. A good part of it probably did go into the soil bank this last year. Actually, as the Commissioner told you, it has been our repeated experience, Senator, that when an area like this in the high plains goes into irrigation, it goes out of wheat production because they can't profitably grow wheat under irrigation.

Senator DWORSHAK. What would the crops be on the irrigated land there?

Mr. DOMINY. It would go into alfalfa and feed grains primarily; corn for silage rather than corn to go into the bin as grain under the loan program.

The sandhill country that surrounds this is one of the finest range livestock areas in the West, as you know, and these farmers as irrigation farmers will raise corn for silage and alfalfa hay and some small grains.

They will feed out this livestock from the neighboring ranches. That will be their primary enterprise under irrigation in this area.

Senator DWORSHAK. In high years, do you have a reliable source of water?

Mr. DOMINY. Yes. This project is on the Loup River, which comes out of the sandhills of Nebraska, which is one of the finest natural reservoirs in the world, because it absorbs the rainfall and keeps the streamflows pretty uniform.

Senator DWORSHAK. You mentioned a while ago that the land does very well in some years, wet years. Would a dry cycle impoverish the sources of water there for storage, or is it reliable under all circumstances?

PROJECT WOULD PROVIDE FIRM WATER SUPPLY

Mr. DOMINY. Our studies indicate that with the project built as designed, they would have a firm water supply.

Chairman HAYDEN. During the very bad drought we had a few years ago in the Southwest the value of irrigation was demonstrated, in that the natural ranges actually burned. However, feed produced from irrigated lands were adequate to save the cattle.

During droughts in other parts of the country the Federal Government has expended substantial sums in the form of drought relief. Just think how much better off the country would be if this money had been invested in water conservation projects?

Mr. DEXHEIMER. Mr. Chairman, I think that is entirely true. The emergency drought relief programs that are carried on by the Federal Government, the nonreimbursable payments that are made, would more than finance all of our operations.

I had the privilege of accompanying the President last January on his tour of the drought area, and the places where hay was purchased and shipped into these drought areas were from irrigation projects throughout the West.

They were the one bright spot in the last 6 or 7 years of drought throughout the southwest part of the United States. Certainly, small investments in these sustained irrigation projects would alleviate a great deal of the drought disaster payments that the Government makes.

From that standpoint alone, if you did not get any of the money back, I think it would be a good investment.

Senator DWORSHAK. Sometimes you are in a quandry, are you not, like in Texas where for 1 year you are confronted with a drought and the next year with a flood situation? What do you do then?

Mr. DEXHEIMER. We have had both conditions in this one year, Senator Dworshak. The people now, of course, in the flood areas, are getting drought relief and emergency measures, both from the Federal Government and the Red Cross.

Just over the past 6 years they have had to liquidate their livestock in many places. Some of their farms and ranches have been abandoned because of the drought and the inability to raise sufficient crops for a living.

People have had to go to towns and work in factories. We are planning, and I ask the committee here to restore our planning funds, for continuing our plans so that we can ultimately at least salvage the water that is available and be able to utilize it in these periods of drought.

Senator DWORSHAK. Those people are probably moving over into Arizona.

Mr. DEXHEIMER. Arizona, Senator, up until January of this year, had a very severe drought and a lot of their ranges have had to be abandoned. It got so bad, the drought was so prolonged, that it may take several years of normal rainfall for the grass to grow again sufficiently to support grazing on the ranges.

However, the irrigated areas in that country have survived and profited, and the livestock have been saved by feeding from the irrigated areas so that those people have not suffered too greatly.

There has been a terrific impact from these 6 or 7 years of drought, particularly in Texas.

Chairman HAYDEN. Even now up in some ranges it is spotted. But, as you say, the fact that there was available within trucking distance

irrigated land where cattle that were starving on the range could be brought in and put on alfalfa feed has been a great help.

Mr. DEXHEIMER. Some of the hay, of course, was shipped from long distances. The railroads in that area cooperated by making a 50-percent freight reduction for those emergency shipments. Everybody had to contribute. The losses were terrific.

HOUSE ALLOWANCE OF BUDGET ESTIMATES

Chairman HAYDEN. The House committee recommended the allowance of the following budget estimates: Frenchman-Cambridge division in Nebraska, $3,260,000; Glendo unit, Wyoming, $9,851,000; the Helena Valley unit in Montana, $4,500,000; the Kirwin unit in Kansas, $1,435,000; Owl Creek unit, Wyoming, $1,100,000; the Sargent unit in Nebraska, $313,000.

If there are no questions from the members or comments from the Bureau, we will insert these justifications in the record.

(The justifications follow:)

MISSOURI RIVER BASIN PROJECT—FRENCHMAN-CAMBRIDGE DIVISION, NEBRASKA

Location.—In southwest Nebraska in Hitchcock, Red Willow, Furnas, and Harland Counties. Project lands extend from Palisade southeastward along Frenchman Creek and from Trenton eastward along the Republican River to Orleans. Principal city in the project area is McCook.

Description.—The major functions to be performed by the division are irrigation and flood control. Water will be impounded by four dams: Trenton Dam on the Republican River, storage capacity of 253,950 acre-feet; Enders Dam on Frenchman Creek, 74,520 acre-feet; Medicine Creek Dam on Medicine Creek, 90,920 acre-feet; and Red Willow Dam on Red Willow Creek, 60,000 acre-feet, for a combined capacity of 479,300 acre-feet. The first three of these dams are completed. The fourth is scheduled to be placed under construction late in fiscal year 1959. Water will be delivered to a service area of 64,360 acres by a system of approximately 241 miles of canals. Trenton Dam will discharge water directly into a part of the canal system; the balance of the stored water, along with natural flow, will be diverted into the system of canals by two diversion dams on the Republican River and one each on Frenchman and Red Willow Creeks.

Benefit-cost ratio.—1.3 to 1.0.

Summarized financial data

Estimated total obligations	$79,297,583
Total obligations to June 30, 1956	51,041,950
Total obligations, fiscal year 1957	3,237,599
Total obligations, fiscal year 1958	3,260,000
Balance to complete	21,758,034

On a cost basis the fiscal year 1958 program will total $3,327,500. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$68,591,000	$68,219,842
1958 congressional justification	79,651,454	79,297,583
Increase	11,060,454	11,077,741

The total estimated cost of the Frenchman-Cambridge division has been increased from $68,591,000 to $79,651,454. This change resulted from adding Red Willow Dam and Reservoir (transferred from USCE), increase of indirect costs, reestimate of quantities, minor adjustments, and the addition of contribution to civil-service retirement fund.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$59,879,700
Recreation	115,000
Subtotal	59,994,700
Nonreimbursements:	
Flood control	19,616,754
Fish and wildlife	40,000
Subtotal	19,656,754
Total	79,651,454

Repayment of reimbursable costs

By irrigation-water users	$8,857,000
Repaid by surplus basinwide revenues	51,137,700
Total	59,994,700

Repayment costs per acre

Federal investment per acre: [1]	
To be repaid by water users	$138.00
To be repaid by surplus basinwide revenues	792.00
Total	930.00
Annual water-user charges: [2]	
Construction	3.83
Operation and maintenance (current prices)	3.50
Total	7.33

[1] Figures reflect averages computed for total acreage, including new lands and those receiving supplemental water only.
[2] For lands receiving full supply.

Repayment contracts.—Repayment contracts with the three irrigation districts of the division have been executed. The contract with the Frenchman-Cambridge Irrigation District, executed in May 1947 and amended in January 1956, provides for payment of $4,401,000 to cover the cost of laterals, service equipment, and immediately needed drains. The Hitchcock and Red Willow Irrigation District executed a contract in November 1956 providing for payment of $1,320,000 to cover the cost of laterals, service equipment, and immediately needed drains. The Frenchman Valley Irrigation District contract was executed in November 1956. Each of the three contracts provides for specified payments, in addition to the sums shown above, toward the construction cost of the supply works.

Physical data

Feature	Type	Total capacity	Structural height	Length
Enders Dam and Reservoir	Earth fill	74,520 acre-feet	134 feet	2,603 feet.
Medicine Creek Dam and Harry Strunk Lake.	do	90,920 acre-feet	165 feet	5,665 feet.
Trenton Dam and Swanson Lake.	do	253,950 acre-feet	144 feet	8,600 feet.
Red Willow Dam and Reservoir.	do	60,000 acre-feet	120 feet	3,050 feet.
Diversion dams (6)	Concrete weir and earth fill.		2–22 feet	22–1,500 feet.
Canals	Earth	18–365 cubic feet per second.		241.1 miles.
Laterals	do	53,870 acres		166 miles.
Drains	do			171.8 miles.

Acres to be served

Full supply	53,870
Supplemental supply	10,490
Total	64,360

Status.—Construction was initiated on the Frenchman-Cambridge division with start of work on Enders Dam in March 1947. The Enders, Medicine Creek, and Trenton Dams are functionally complete. As of June 30, 1957, all of the Cambridge and Bartley canal and lateral systems will have been completed. Construction will be nearly completed on the upper Meeker canal and laterals and the upper Meeker subcanal and laterals. Construction will have been started on the replacement of existing siphons of the Culbertson Canal, and the field data either completed or well advanced on the remainder of the Frenchman unit. Field data for the Red Willow Dam will have been well advanced.

WORK PROPOSED, FISCAL YEAR 1958

Red Willow Dam and Reservoir, $10,000.—These funds will cover the collection of field data for the Red Willow Dam.

Trenton Dam and Swanson Lake, $15,000.—This amount is programed for contingent liability on contract No. 181r–1322 with the Chicago, Burlington & Quincy Railroad Co.

Cambridge distribution system and drains, $2,000.—The program provides for accumulation of field data for Cambridge drains.

Bartley distribution system and drains, $2,000.—For accumulation of field data for Bartley drains.

Meeker-Driftwood distribution system and drains, $2,078,000.—These funds will permit continued construction on the Meeker-Driftwod system. Specifications will be prepared and construction initiated on Driftwood west canal and canal laterals and Meeker extension canal and laterals.

Culbertson diversion dam, $15,060.—For preparation of specifications and initial construction.

Frenchman unit distribution system and drains, $976,600.—These funds will permit continued construction on the first section and initiation of work on the balance of the Culbertson system.

Frenchman Creek channelization, $132,800.—The program provides for the preparation of specifications and initial construction of the Frenchman Creek channelization.

Various, $30,000.—Miscellaneous small items of construction and accumulation of deferred costs.

Transitional development costs, $20,000.—Provides for assistance to settlers and the cost of operating and maintaining capacity in irrigation facilities not assignable to water users being currently served.

Contribution to civil service retirement fund, $46,000.—Initial-year contribution to civil service retirement fund.

Other expenditures and credits,—$67,500.—Cost of service facilities accrued in prior years distributed to permanent property in the budget year.

Missouri River Basin Project—Glendo Unit, Wyoming

Location.—Glendo Dam and powerplant is on the North Platte River approximately 6 miles southeast of Glendo, Wyo. Fremont Canyon powerplant will be located between the backwater of Alcova Reservoir and Pathfinder Dam.

Description.—The principal feature of this unit is Glendo Dam and Reservoir of 800,000 acre-foot storage capacity which will provide for flood control, regulation of upstream power releases, and storage and delivery of water for irrigation of lands in Wyoming and Nebraska. A powerplant with a nameplate rating of 24,000 kilowatts is being constructed at Glendo Dam. The Fremont Canyon powerplant also will be constructed as an integral part of the unit with a nameplate rating of 48,000 kilowatts. In addition to generation of energy at the Glendo and Fremont Canyon plants, the regulation of water provided by Glendo Reservoir will result in converting operations at the Alcova powerplant from a seasonal to a year-round basis.

The agreement between the States of Wyoming, Colorado, and Nebraska on the operation of Glendo Reservoir as stipulated in the amended Supreme Court decree allows Colorado to increase her irrigated acreage by 10,000, allocates 15,000 acre-feet of the Glendo yield annually to Wyoming, and 25,000 acre-feet to Nebraska. It provides further that 100,000 acre-feet of storage sapacity be allocated to irrigation and that 40,000 acre-feet of runoff plus evaporation losses on irrigation storage may be stored in Glendo Reservoir in any year.

Benefit-cost ratio.—1.76 to 1.

Summarized financial data

Estimated total obligations	$39,093,932
Total obligations to June 30, 1956	10,758,375
Total obligations, fiscal year 1957	11,012,214
Total obligations, fiscal year 1958	9,951,000
Balance to complete	7,372,343

On a cost basis the fiscal year 1958 program totals $10,297,700. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$42,771,000	$42,602,165
1958 congressional justification	39,249,140	39,093,932
Decrease	3,521,860	3,508,233

The total estimated cost of the Glendo unit has been decreased from $42,771,000 to $39,249,140. The change is principally due to the receipt of very favorable bids on both construction and materials and equipment contracts and the firming up of quantities on construction contracts awarded. The decrease in total cost is partially offset by the addition on contribution to civil-service retirement fund.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$4,004,880
Power	30,246,630
Recreation	13,000
Subtotal, reimbursable	34,264,510
Nonreimbursable:	
Flood control	4,330,800
Fish and wildlife	653,830
Subtotal, nonreimbursable	4,984,630
Total	39,249,140

Repayment of reimbursable costs

By water users	$2,880,000
By basinwide power revenues	[1] 31,384,510
Total	34,264,510

[1] Exclusive of interest during construction of $1,444,200.

Repayment costs per acre [1]

Federal investment per acre:	
To be repaid from water users	$72.00
To be repaid from power revenues	28.00
Total	100.00
Annual water user charges (per acre-foot):	
Water service charge (average)	1.80
Distribution systems:	
Construction	0
Operation and maintenance	.10
Total	1.90

[1] Per acre data and annual water charges based upon potential acreage that could be served, 40,000, and as related to the stipulation which permits the use of water for irrigation. Water users may require permanent water rights and, therefore, willing to contract via renewal provisions to cover reimbursable costs allocated to irrigation.

Repayment contracts.—It is anticipated that repayment contracts will be executed well in advance of the availability of water for supplementing present supply of existing irrigation development.

Physical data

Feature	Type	Capacity	Height	Length
			Feet	*Feet*
Glendo Dam	Earth fill	800,000 acre-feet	207	1,947
Glendo powerplant	Hydro	24,000 kilowatts		
Fremon Canyon powerplant	do	48,000 kilowatts		
Transmission system	2 switchyards	84,000 kilovolt-ampere, 115 kilovolt.		

Acres to be served

Full supply	0
Supplemental supply	40,000
Total	40,000

Status.—Construction began December 16, 1954. As of June 30, 1957, the project will be approximately 54 percent complete. Construction will be underway on Glendo Dam and Reservoir, Glendo powerplant, Fremont Canyon powerplant, and relocation of United States No. 87 Highway. Glendo housing and office buildings were completed during fiscal year 1956. C. B. & Q. Railroad relocation and Fremont Canyon housing will be completed during fiscal year 1957.

WORK PROPOSED, FISCAL YEAR 1958

Glendo Dam and Reservoir, $907,606.—The program provides for the completion of Glendo Dam and Reservoir and the initiation of storage by November 1957. Relocation of existing facilities will be completed.

Glendo powerplant and switchyard, $768,627.—The program provides for completion of Glendo powerplant and the first unit (12,000 kilowatts) will be placed on the line May 1, 1958. The second (12,000 kilowatts) and final unit will be placed on the line June 1, 1958. The switchyard will also be completed during the year.

Fremont Canyon powerplant and switchyard, $8,173,767.—Work will continue under the prime contract to be awarded in fiscal year 1957, with initial power generation from the first and second units at the end of fiscal year 1960. Supply

contracts will be awarded for butterfly valves, governors, crane, and other powerplant equipment. The program also provides for payment of earnings on switchyard supply contracts and for award of the prime construction contract late in the fiscal year.

General property, Glando, $346,700.—The amount represents a transfer of costs from the service facility account for Glendo housing and office buildings which were completed during fiscal year 1956.

Contribution to civil service retirement fund, $101,000.—Initial year contribution to civil service retirement fund.

Other expenditures and credits, —$346,700.—Cost of service facilities accrued in prior years which will be distributed to the Glendo general property item in the budget year.

Missouri River Basin Project—Helena Valley Unit, Montana

Location.—Central Montana in Lewis and Clark County adjoining the city of Helena and 3.5 miles west of Canyon Ferry Dam.

Description.—The primary purpose of the unit is to provide a full water supply for the irrigation of 12,533 acres of land in the Helena Valley Irrigation District and a supplemental municipal water supply for the city of Helena, Mont. The unit will be constructed to provide a future supplemental water supply for 5,098 acres of land in the area. Of the 12,533 acres in the irrigation district, 5,233 are inadequately served by an existing pumping system which has deteriorated to such an extent that failure can be expected at any date. This system will be abandoned as soon as irrigation water from the Helena Valley unit is available. The balance of the lands in the unit are either dry land or have inadequate water rights. The unit consists of a pumping plant at Canyon Ferry Dam, a tunnel leading to a canal emptying into a regulating reservoir, a main canal circling the valley, and a lateral and drainage system.

Benefit-cost ratio.—1.50 : 1.00.

Summarized financial data

Estimated total obligations	$11,456,113
Total obligations to June 30, 1956	914,342
Total obligations, fiscal year 1957	3,148,871
Total obligations, fiscal year 1958	4,500,000
Balance to complete	2,892,900

On a cost basis the fiscal year 1958 program will total $4,490,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justifications	$11,649,000	$11,643,212
1958 congressional justifications	11,480,900	11,456,113
Decrease	168,100	187,099

Decrease principally due to adjustment of the estimate to reflect more accurate quantity estimates based on latest field data; offset by increase of $162,000 for additions of works to regulating dam and reservoir for municipal water and addition of $68,900 for contributions to civil-service retirement fund.

Tentative allocation of total estimated project cost

Reimbursable:	
Irrigation	$10,553,365
Municipal water	652,535
Recreation	6,000
Subtotal, reimbursable	11,211,900
Nonreimbursable: Fish and wildlife	269,000
Subtotal, nonreimbursable	269,000
Total	11,480,900

Repayment of reimbursable costs

By irrigation water users:	
Full service lands	$802,112
Supplemental service lands	[1] 887,052
By municipal water users	[2] 625,535
By other revenues from Missouri River Basin project	8,870,201
Total	11,211,900

[1] Estimated on basis of future contracts.
[2] Contract obligation of $728,000 includes portion of Canyon Ferry unit costs and interest during construction.

Repayment costs per acre

Federal irrigation investment per acre:	
To be repaid from water users	$96
To be repaid from municipal water	0
To be repaid from other Missouri River Basin propect revenues	503
Total	599

Annual water user charges:

	Full	*Supplemental*
Construction	$1.60	$4.35
Operation and maintenance	3.95	----
Total	5.55	4.35

Repayment contracts.—The Helena Valley Irrigation District (consisting of the 12,533 irrigable acres for which distribution works will be built to furnish a full water supply) was formed on June 28, 1955. The district court by decree of November 3, 1956, approved execution of the repayment contract by the Helena Valley Irrigation District. The contract was executed by the district on November 24 and by the United States on December 3, 1956.

A contract with the city of Helena for supplemental municipal water was executed by the city on August 27, 1956, and by the United States on December 3, 1956.

Contracts with the irrigation district and the city of Helena meet the 12-percent total repayment requirement of the 84th Congress.

The system will be constructed with sufficient capacity to provide supplemental water to 5,098 acres, all of which would be served from the main canal. Repayment negotiations will be completed with these prospective water users prior to furnishing them a supplemental water supply. The start of these negotiations is dependent on the interest shown by the prospective supplemental water users.

Physical data

Feature	Type	Capacity	Height	Length
Helena Valley Dam and Regulating Reservoir.	Earthfill	[1] 10,568	[2] 75	[2] 2,600
Helena Valley Pumping Plant	Hydraulic-turbine-driven centrifugal pumps.	[3] 300 [4] 10,000		
Helena Valley Tunnel and Canal	Horseshoe-shaped concrete lined tunnel; earth lined canal.	[3] 300		[5] 34.8
Lateral system		[6]		

[1] Acre-feet.
[2] Feet.
[3] Cubic feet per second.
[4] Horsepower.
[5] Miles.
[6] Serves 12,533 acres (full supply).

Acres to be served

Full supply	12,533
Supplemental supply	5,098
Total	17,631

Status.—As of June 30, 1956, preconstruction surveys and designs were well advanced in preparation for the start of construction in fiscal year 1957. The pumping plant, pumping plant machinery, and the tunnel were placed under contract as soon as repayment questions were resolved. The unit will be 36 percent complete on June 30, 1957. Construction of the regulating dam and reservoir, pumping plant, tunnel, and main canal will be underway. Collection of design data for other features will be underway.

WORK PROPOSED, FISCAL YEAR 1958

Helena Valley Dam and regulating reservoir, $443,000.—This program provides for continuation of construction on the dam and reservoir with completion scheduled for fiscal year 1959.

Helena Valley pumping plant, $924,000.—Construction on the pumping plant and the installation of equipment will be continued with completion scheduled for fiscal year 1959.

Helena Valley tunnel and canal, $2,412,000.—Construction will be continued on the tunnel and the main canal system. Completion of the initial features is scheduled for fiscal year 1959.

Lateral system, $368,000.—The program provides for starting construction of the lateral system with completion of the first two sections in fiscal year 1959.

Drainage system, $269,000.—Construction of the drainage system will be started with completion of the first section in fiscal year 1959.

General property, $29,000.—The program provides for starting construction of the project headquarters building with completion in fiscal year 1959. Equipment to be used for initial operation and maintenance in fiscal year 1959 will be ordered late in the year.

Contribution to civil service retirement fund, $32,000.—Initial year contribution to civil service retirement fund.

Transitional development cost, $9,000.—Settler assistance in the form of preentry community service planning will be continued throughout the year.

Adjustments, $4,000.—Represents net result of nonappropriation equipment transfers and cost transfers from the Solicitor's Office.

Other expenditures and credits, $10,000—Cost of service facilities accrued in the budget year which will be distributed to permanent property in subsequent year.

MISSOURI RIVER BASIN PROJECT—SOLOMON DIVISION, KIRWIN UNIT, KANSAS

Location.—In north central Kansas along the north fork of the Solomon River in Phillips, Smith, and Osborne Counties. The project lands extend from Kirwin Dam, adjacent to the town of Kirwin, Kans., southeastward to Portis, Kans.

Description.—Consists of the multipurpose Kirwin Dam and Reservoir of 314,600 acre-feet capacity and the Kirwin main, Kirwin north, and Kirwin south canal, lateral, and drainage systems which will serve 11,500 irrigable acres of land. Unit lands will be served by a canal system originating at the irrigation outlet works in the dam. The main canal, serving lands on the north side of the river, will extend to the approximate midpoint of the unit, where it divides into north and south canals. The north canal continues along the north side of the river to supply that area; the south canal siphons across the river to serve irrigable acres on the south side of the river.

Benefit/cost ratio.—1.02 to 1.

Summarized financial data

Estimated total obligations	$19,705,842
Total obligations to June 30, 1956	15,379,513
Total obligations, fiscal year 1957	2,143,229
Total obligations, fiscal year 1958	1,435,000
Balance to complete	748,100

On a cost basis the fiscal year 1958 program will total $1,435,755. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$18,589,000	$18,541,209
1958 Budget Bureau estimate	19,929,100	19,705,842
Increase	1,340,100	1,164,633

The estimated total cost of the Kirwin unit has been increased from $18,589,000 to $19,929,100. This change resulted from an increase in Kirwin north canal, south canal, and south laterals due to increased quantities, price index, unit price, and corresponding indirect costs, and also because of the contribution to civil-service retirement fund addition to the estimate. This has been offset in part by a decrease in final cost of Kirwin Dam, decrease in Kirwin main canal and laterals and north laterals.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$8,080,100
Recreation	10,000
Subtotal	8,090,100
Nonreimbursable: Flood control	11,839,000
Total	19,929,100

Repayment of reimbursable costs

By irrigation water users	$2,016,000
By surplus basinwide revenues	6,074,100
Total	8,090,100

Repayment costs per acre

Federal investment per acre:	
To be repaid by water users	$175.00
To be repaid by surplus basinwide revenues	528.00
Total	703.00
Annual water user charges:	
Construction	4.43
Operation and maintenance (current prices)	3.64
Total	8.07

Repayment contracts.—The Kirwin Irrigation District executed a water service and repayment contract in June 1953. The contract provides for the repayment of $1,500,000 on distribution works, plus the cost of drains to be constructed by the district, and water service provisions to return an estimated $4,500 annually following a 5-year development period.

Physical data

Feature	Type	Capacity	Structural height	Length
Kirwin Dam and Reservoir	Earthfill	314,600 acre-feet	169 feet	12,648 feet.
Kirwin main canal	Earth	175 cubic feet per second		13.4 miles.
Kirwin north canal	do	70 cubic feet per second		14.3 miles.
Kirwin south canal	do	60 cubic feet per second		17.5 miles.
Kirwin main laterals	do	2,630 acre-feet		10.2 miles.
Kirwin north laterals	do	5,030 acre-feet		18.6 miles.
Kirwin south laterals	do	3,840 acre.feet		10.0 miles.
Kirwin drains	do			38.0 miles.

Acres to be served

Full supply	11,500
Supplemental supply	0
Total	11,500

Status.—Construction of Kirwin Dam started in March 1952. The definite plan report was approved by the Commissioner in September 1952. As of June 30, 1957, the dam will be complete, including the Parshall flume for measuring in river outlet. The unit as a whole will be 96 percent complete. The Kirwin main canal and laterals will have been completed, the construction of the Kirwin north canal and laterals will be almost completed, and the construction of the Kirwin south canal and laterals will have been initiated.

WORK PROPOSED, FISCAL YEAR 1958

Kirwin Dam and Reservoir, $11,000.—This amount is programed for contingent liability on contract No. 14–06–700–61 with the Missouri Pacific Railroad Co.

Kirwin distribution system and drains, $1,372,855.—The program provides for the completion of construction on the Kirwin north canal and laterals, also completion of construction on the Kirwin south canal and laterals, and accumulation of field data for Kirwin drains.

Transitional development costs, $29,800.—Of this amount, $9,800 is programed for settlers assistance costs, and $20,000 is programed for future year capacity provisions.

Contribution to civil service retirement fund, $22,100.—Initial year contribution to civil-service retirement fund.

Other expenditures and credits, —$755.—Cost of stores procured prior years which are to be distributed to project features in the budget year.

MISSOURI RIVER BASIN PROJECT—OWL CREEK UNIT, WYOMING

Location.—Owl Creek unit is located in Hot Springs County, north central Wyoming, the eastern end being within 4 miles of Thermopolis, Wyo., and the western end approximately 40 miles northwest of Thermopolis.

Description.—The Owl Creek unit will provide supplemental water supply for 13,123 acres of irrigable land. The acreage is situated along Owl Creek in a narrow strip extending from the junction of the North Fork and South Fork of the Owl Creek to the confluence of Owl Creek and the Big Horn River. The integral parts of the system are an earth fill dam 175 feet above stream bed with crest length of 460 feet on the South Fork which will impound 17,300 acre-feet of water. Two pumping plants will raise water from the Big Horn River to serve land in the Lucerne area. The construction of Anchor Dam and Lucerne pumping plants and canals will assure an adequate supply of water to the Owl Creek Irrigation District, and the Indian landowners of the Arapahoe Ranch.

Benefit-cost ratio.—.89 to 1.00.

Summarized financial data

Estimated total obligations	$3,122,000
Total obligations to June 30, 1956	512,120
Total obligations, fiscal year 1957	1,030,000
Total obligations, fiscal year 1958	1,249,880
Balance to complete	330,000

On a cost basis the fiscal year 1958 program will total $1,293,656. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$3,352,000	$2,586,977
1958 congressional justification	3,756,300	3,122,000
Increase	404,300	535,023

The total project cost of the Owl Creek unit has been increased from $3,352,000 to $3,756,300. The increase is principally due to rise in prices and change in design due to geologic conditions of the foundations of Anchor Dam. Increase also provides for $10,300 contribution to civil-service retirement fund.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$3,622,300
Recreation	18,000
Subtotal, reimbursable	3,640,300
Nonreimbursable:	
Flood control	53,000
Fish and wildlife	63,000
Subtotal, nonreimbursable	116,000
Total	3,756,300

Repayment of reimbursable costs

By irrigation water users	$1,049,680
By power revenues	2,590,620
Total	3,640,300

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$80.00
To be repaid from power revenues	197.00
Total	277.00
Annual water user charges:	
Construction	2.00
Operation and maintenance	1.08
Total	3.08

Repayment contracts.—A water service contract was executed with the Owl Creek Irrigation District and confirmed by the court on October 10, 1955. The remaining costs of this unit will be met with revenues from Missouri River Basin power.

Physical data

Feature	Type	Capacity	Height	Length
Anchor Dam	Earth fill	17,300 acre-feet	175 feet above streambed.	460 feet.
Pumping plants (2)	One housed	2-22 cubic feet per second and 2-20 cubic feet per second units.		
	One outdoor	2-16.5 cubic feet per second units.		
Canals	Concrete lined and earth lined.	40-94 cubic feet per second.		3.71 miles.

Acres to be served

Full supply	
Supplemental supply	13,123
Total	13,123

Status.—Construction began in January 1956. As of June 30, 1957, the unit will be approximately 50 percent complete. Construction will be underway on Anchor Dam and Lucerne pumping plants and canals will be completed.

WORK PROPOSED, FISCAL YEAR 1958

Anchor Dam and Reservoir, $1,285,656.—The program provides for substantial completion of the dam and reservoir, clearing of reservoir area, and installation of high-pressure gates and elevator.

Contributions to civil service retirement fund, $8,000.—Initial year contribution to civil service retirement fund.

Other expenditures and credits, —$2,776.—Represents cost of service facilities accrued in prior years which will be distributed to permanent property in the budget year.

Undelivered orders, —$41,000.—Liquidation of prior year obligations on the contracts for high pressure gates and elevator.

MISSOURI RIVER BASIN PROJECT—SARGENT UNIT, NEBRASKA

Location.—In Blaine and Custer Counties, Nebr., extending from Milburn southeast through the Middle Loup Valley to Comstock.

Description.—Primary purpose of the unit is to provide a full water supply for the irrigation of 17,560 acres of land most of which are now dry farmed along the Middle Loup River. Facilities of the unit include the Milburn diversion dam, 39.6 miles of canals with attendant dikes and channels, a small pumping installation and approximately 44 miles of laterals. Included in the above total acreage but presently deferred, are features to the south of the river consisting of an extension to the Milburn diversion dam, a 15.5 mile canal, a 4,400 kilowatt powerplant and laterals to serve about 3,820 acres.

Benefit-cost ratio.—1.07 : 1.

Summarized financial data

Estimated total obligations	$14,492,273
Total obligations to June 30, 1956	4,195,716
Total obligations, fiscal year 1957	1,213,950
Total obligations, fiscal year 1958	313,000
Balance to complete	8,769,607

On a cost basis the fiscal year 1958 program will total $756,241. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$14,924,600	$14,458,873
1958 congressional justification	14,946,000	14,492,273
Increase	21,400	33,400

The total estimated cost for the Sargent unit has been increased from $14,924,600 to $14,946,000 due to an increase in future year capacity provision on irrigation features.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$8,416,400
Power	6,295,000
Subtotal, reimbursable	14,711,400
Nonreimbursable: Flood control	234,600
Subtotal, nonreimbursable	234,600
Total	14,946,000

Repayment of reimbursable costs

Irrigation:	
Irrigation water users by water rates	$171,000
Irrigation water users for distribution system	2,509,000
Repaid by surplus basinwide power revenues	5,736,400
Subtotal	8,416,400
Power: Included in basinwide power systems costs and repaid by basinwide power revenues	6,295,000
Total	14,711,400

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$153.00
To be repaid from power revenues	325.00
Total	478.00
Water service charge (average)	0.26
Construction	3.87
Operation and maintenance	2.81
Total	6.94

Repayment contracts.—On September 11, 1954, the Sargent Irrigation District Board of Directors executed a water service and repayment contract. On October 11, 1954, the contract was executed by the Secretary of the Interior.

The repayment obligation of the Sargent Irrigation District in connection with the distribution system for about 17,560 acres lying along both sides of the Middle Loup River is $1,785,400. Payments will be made in 40 years after completion of construction and the close of a 10-year development period. Under water service features of the contract, it is estimated that over the initial 40-year period a total of $171,000 additional will be paid by the district toward the return of supply works construction costs. The contract also provides that the district shall be responsible for the construction of drainage works. Amendment of this contract is underway with a view to integrating it with the proposed Farwell unit repayment contract and the proposed water service contract with the Loup Basin Reclamation District which includes both the Sargent and Farwell units within it boundaries. Certain operating advantages will be realized, and total payments to the United States will remain the same.

Physical data

Feature	Type	Capacity	Height	Length
Milburn diversion dam	Concrete weir-earth dike.		15 feet	3,880 feet.
Sargent Canal	Earth canal	260 cubic feet per second.		39.6 miles.
Sargent laterals	Earth laterals			44 miles.

Acres to be served

Full supply	17,560
Supplemental supply	None
Total	17,560

Status.—Construction began February 1955. As of June 30, 1957, construction will have been completed on the Milburn diversion dam, caretaker's residence, first and second sections of the Sargent Canal, first section of the Sargent laterals and the second section of the detention dikes and channels. The warehouse for operation and maintenance headquarters to be used by the district will have been completed. The first stage of the construction of this unit is scheduled to be completed in fiscal year 1958. The remaining work to be accomplished includes the settlement of the waterpower interference rights with the Middle Loup Public Power and Irrigation District, completion of construction contracts for section 3 of the Sargent Canal, section 2 of the Sargent laterals, section 3 of the detention dikes and channels, and purchase of general property for operation and maintenance of the facilities.

WORK PROPOSED, FISCAL YEAR 1958

Milburn diversion dam, $92,206.—These funds will be used for the settlement of the waterpower interference problem with the Middle Loup Public Power and Irrigation District.

Woods Park pumping plant, $6,509.—To be used for completing the construction contract initiated late in fiscal year 1956. This work has been included in the specifications for the third section of the Sargent Canal and second section of the Sargent laterals.

Distribution system and drains, $548,183.—Provides for the completion of the third section of the Sargent Canal and detention dikes and the second section of Sargent laterals. The construction contract for these facilities was awarded late in fiscal year 1956 and work has been continuous in 1957 and is scheduled for completion in the spring of 1958.

General property, $60,291.—Purchase of the necessary equipment for operation and maintenance on the project will be completed during the fiscal year.

Transitional development cost, $35,889.—Represents costs incurred for settlers' assistance and the cost of operating and maintaining capacity in irrigation facilities not assignable to water users being currently served.

Contribution to civil-service retirement fund, $7,500.—Initial year contribution to civil-service retirement fund.

Adjustments, $5,663.—Cost adjustment resulting from sale of salvaged material which is offset by a corresponding reduction in costs and nonappropriation transfers.

Other expenditures and credits, —$10,500.—Distribution of costs incurred for store and service facilities in prior years being transferred to project features in the budget year.

Undelivered orders, —$432,741.—Liquidation of prior year contract obligations.

SHOSHONE EXTENSIONS UNIT

Chairman HAYDEN. The House committee recommended that the budget estimate of $500,000 for initiation of the Shoshone extensions unit be disallowed, due to the lack of local interest. The Department is not seeking a restoration of this reduction.

That was a matter we discussed this morning when Senator O'Mahoney was here, I believe.

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. I will place the justification in the record, unless there is some comment that you would make now.

Mr. DEXHEIMER. No, sir; except that we could utilize that money on some of our other programs, Mr. Chairman.

(The justification follows:)

MISSOURI RIVER BASIN PROJECT

SHOSHONE EXTENSIONS UNIT, WYOMING

Location

In Park and Big Horn Counties in northwestern Wyoming, between the Shoshone and Greybull River to the north and south, and Buffalo Bill Dam and Bighorn River on the west and east.

Description

The purpose of the unit under ultimate development is to provide a full water supply to 56,720 acres of new land and supplemental water to 46,300 acres, using facilities of the existing Shoshone project. The initial development proposed for construction at this time will be limited to 17,440 acres of new land and the supplemental water supply. Adequate storage capacity exists in Buffalo Bill Reservoir and in the Shoshone Canyon conduit to serve the requirements of this initial development. A portion of the water released from the conduit will be diverted to the canals and lateral systems of the Oregon Basin—Dry Creek areas and the Y U Bench areas. Excess capacity in the canals will permit use of water discharged into Greybull River on the lands which are in need of supplemental water in Greybull Irrigation District. Development of the remaining 39,280 acres of new land must await further water supply arrangements.

Benefit-cost ratio

1.40:1

Summarized financial data

Estimated total obligations	$46,804,000
Total obligations to June 30, 1956	(1)
Total obligations, fiscal year 1957	(1)
Total obligations, fiscal year 1958	500,000
Balance to complete	46,304,000

[1] Financed from Missouri River Basin investigation program.

On cost basis the fiscal year 1958 program will total $492,200. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Allocation of estimated total unit cost

Reimbursable:	
Irrigation	$47,451,111
Recreation	8,000
Subtotal, reimbursable	47,459,111
Nonreimbursable:	
Fish and Wildlife	624,989
Total	48,084,100

Repayment of reimbursable costs

By irrigation water users	$8,858,250
By basinwide power revenues	36,600,861
Total	47,459,111

Repayment costs per acre

Federal irrigation investment per acre:[1]	
Repaid by water users	$156.00
Repaid by basinwide power revenues	681.00
Total	837.00
Annual water user charges:	
Construction	3.26
Operation and maintenance	2.84
Total	6.10

[1] Based upon 56,700 irrigable acres of full supply land.

Repayment contracts

The major portion of the land is Government owned and will be opened for settlement upon completion of the project. Formation of an irrigation district and negotiation of a repayment contract will be required of the settlers at a later date.

Physical data

Feature	Type	Capacity	Length
Oregon Basin Reservoir	Natural basin, no dam required.	120,000 acre-feet [1]	
Oregon Basin feeder canal	Earth plus 4.28 miles of concrete lining.	600 cubic feet per second	23 miles.
Dry Creek canal	Earth plus 0.87 miles of concrete lining.	525 cubic feet per second	24 miles.
Emblem canal		171 cubic feet per second	4.4 miles.
Dry Creek canal distribution system.		20,090 acres	
Greybull River diversion dam, YU canal and lateral YU 26.7.		292 cubic feet per second	24 miles +.
Laterals:			
YU Bench and South Bench.		11,050 acres	
Upper Emblem Bench		1,110 acres	

[1] Conservation.

Physical data—Continued

	Acres
Oregon Basin-Dry Creek area:	
Full supply	5,280
Supplemental supply	42,500
Subtotal	47,780
YU Bench area:	
Full supply	12,160
Supplemental supply	------
Subtotal	12,160
Features not included in initial development:	
Full supply	39,280
Supplemental supply	[1] 3,800
Subtotal	43,080
Total	103,020

[1] Community pasture.

Status

As of June 30, 1956, the detailed studies of the Oregon Basin feeder canal, other portions of the Oregon Basin-Dry Creek and YU bench areas, and the polecat bench area were completed. The unit report was completed in fiscal year 1956 and the definite-plan report on the Oregon Basin-Dry Creek and YU bench area will have been completed by the end of fiscal year 1957.

Work proposed, fiscal year 1958

Oregon Basin Reservoir, $60,000.—Work will be initiated on plans and specifications of the outlet works for construction in fiscal year 1959.

Oregon Basin feeder canal, $373,000.—Detailed plans and estimates will be complete and contract awarded for construction in the spring of fiscal year 1958.

Dry Creek-Emblem canals, $21,400.—Investigation will continue toward working on detail plans in fiscal year 1959.

Contribution to civil-service retirement fund, $11,400.—Initial year contribution to civil-service retirement fund.

Adjustments, $26,400.—Adjustment of prior-year investigation costs.

Other expenditures, and credits, $7,800.—Stores, equipment, etc., to be placed in cost in subsequent years as used.

TRANSMISSION DIVISION AND WEBSTER UNIT

Chairman HAYDEN. The House committee recommended the allowance of the budget estimate of $8 million for the transmission division, and $1 million for the Webster unit. If there are no questions or comments, I will insert those justifications in the record.

(The justifications follow:)

MISSOURI RIVER BASIN PROJECT

TRANSMISSION DIVISION

Location

The transmission division of the Missouri River Basin project includes the necessary facilities required to carry to market the power generated by powerplants of the Corps of Engineers and the Bureau of Reclamation in the basin. This power market now includes North Dakota, South Dakota, Nebraska, and portions of Montana, Wyoming, Colorado, Minnesota, and Iowa.

Summarized financial data

Estimated total obligations	$297,620,170
Total obligations June 30, 1956	−93,395,969
Total obligations, fiscal year 1957	−7,365,134
Total obligations, fiscal year 1958	−8,680,000
Balance to complete	188,179,067

On a cost basis the fiscal year 1958 program will total $8,675,443. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Cost	Obligations
Fiscal year 1957 congressional justification	$294,563,018	$293,284,536
Fiscal year 1958 congressional justification	298,498,035	297,620,170
Increase	3,935,017	4,335,634

This increase is attributable to adjustments to reflect current field data, actual bid prices, changes in design, current cost data, changes in future transmission line requirements as a result of changing power demands, and contributions to the civil-service retirement fund.

Allocation of estimated total project costs

Reimbursable power	$298,498,035

Repayment of reimbursable costs

Reimbursable power costs included in basin-wide system and repaid by basin-wide power revenue	298,498,035

Physical data

Feature	Capacity	Length
		Miles
Transmission lines [1]	12.5 kilovolts	3.5
	34.5 kilovolts	13.17
	69.0 kilovolts	208.50
	115.0 kilovolts	2,568.10
	230.0 kilovolts	1,816.95
Substation (75)[1]	2,264,333 kilovolt-amperes	

[1] Excludes several minor substation, minor low-voltage transmission lines identified as REA tap lines, etc., and transmission lines and substations (future).

Status

Construction of transmission facilities began in November 1947. As of June 30, 1956, the Bureau had completed the transmission lines and substations initially required to interconnect the main stem powerplants and to deliver Missouri River Basin power to load centers. The small colored map shows in gray these completed facilities. During fiscal year 1957 the Bureau will have under construction transmission lines and substations that will be required as additional power is brought into production in the Missouri River Basin. These facilities are shown in blue on the map.

Work proposal, fiscal year 1958

East River, S. Dak. 115-kilovolt transmission lines and 115- and 230-kilovolt substations, $745,000.—Provides for completion of initial 230-kilovolt additions to Sioux Falls substation to provide terminal facilities for the Utica Junction-Sioux Falls 230-kilovolt transmission line. Invitations will be issued and supply and construction contracts awarded for construction of 41.8-kilovolt additions

to Summit substation. This construction will provide an additional point for delivery of power to the Ottertail Power Co.

Fort Randall-Sioux City 230-kilovolt transmission line and substation, $524,000.—The program provides for completion of construction of the 75,000-kilovolt-ampere addition to Sioux City substation to provide a 161-kilovolt interconnection with the Iowa Public Service Co. The installation of a 230-kilovolt air-break switch in the Fort Randall-Sioux City 230-kilovolt line at Utica Junction will be completed this fiscal year.

Big Bend-Watertown-Granite Falls 230-kilovolt transmission lines and substation, $335,000.—Construction of additions to Granite Falls substation to provide a 69-kilovolt delivery to the Rural Cooperative Power Association will be completed. Contracts will be awarded for additional switching equipment and reactors preparatory to installation next fiscal year for the terminal facilities of the Fargo-Granite Falls 230-kilovolt line.

Utica Junction-Sioux Falls 230-kilovolt transmission line, $1,540,000.—Provision is made for substantial supply and construction contract earnings and for the continuation of acquisition of right-of-way. Contracts will be awarded for stringing conductor and overhead ground wire. The installation of a 230-kilovolt air-break switch at Utica Junction will be completed.

Jamestown-Fargo 230-kilovolt transmission line and substations, $485,000.—Stage 02 of the Fargo substation which furnishes additional capacity for the 69-kilovolt circuit will be completed. Stage 04 of this substation, consisting of additional transformer capacity and voltage-control equipment, will be well started with acquisition of equipment being the major accomplishment. Award of the construction contract will be made late in the year.

Fargo-Grand Forks 115-kilovolt transmission line and substation, $85,000.—This program provides for completing Stage 01 of the Grand Forks substation, including record drawings and closing-out contracts.

Dawson County-Bismarck 230-kilovolt transmission line and substation, $850,000.—Specifications will be issued and contracts awarded for furnishing steel towers and for constructing footings and erecting towers on the line. Acquisition of right-of-way is provided for.

Fargo-Granite Falls 230-kilovolt transmission line and substations, $2,027,000.—Construction of footings and erection of towers on the line will continue. Contracts will be awarded for furnishing and stringing conductor. Acquisition of right-of-way for the line will continue. (This item was formerly called Fargo-Benson-Granite Falls 230-kilovolt transmission line and substations.)

Taplines, substations, and equipment to serve REA and other customers, $1,014,234.—Provides for continuation of work involving installation of metering and other equipment and construction of substations, substation additions, and taplines required to meet increased power demands.

General property, $469,585.—Completion of acquisition of tie line-load and frequency-control equipment and installation of this equipment has been provided for. Acquisition of very high frequency communication equipment for the Montana and North Dakota systems tie and amplitude modulation radio equipment for Jamestown substation has been provided, as well as additional operation and maintenance equipment to meet the requirements of an expanding system. Preliminary planning for the multichannel microwave radio communication system is also provided for. The program also provides for collection of design data for extension of the very high frequency radio system from Granite Falls to Fargo and the procurement and installation of communication facilities to serve the Bighorn Canyon area in Wyoming. The construction of the power-system dispatching office at Watertown will be initiated in the fiscal year. Funds are also programed for minor supply contracts on carrier current and telemetering additions to the transmission system.

Transmission lines and substations (future), $55,300.—This represents distribution from investigation costs.

Contribution to civil-service retirement fund, $108,000.—Initial year contribution to civil-service retirement fund.

Reconductoring Greeley-Beaver Creek transmission line, $365,000.—This program provides for the preparation of final plans and specifications, award of contract and contract progress payments for the reconductoring of 65.3 miles of 115-kilovolt transmission line.

Adjustments, $72,324.—Represents nonappropriation transfers of equipment, service facilities, and other cost adjustments.

Other expenditures and credits, $4,557.—Net increase in stores financed from fiscal year 1958 funds the cost of which will be distributed to permanent property in subsequent years.

MISSOURI RIVER BASIN PROJECT

SOLOMON DIVISION, WEBSTER UNIT, KANSAS

Location

In north-central Kansas along the South Fork of the Solomon River in Rooks and Osborne Counties. Webster Dam, the principal feature, is 1 mile east of the town of Webster in Rooks County. Project lands extend from a point approximately 1 mile east of Woodston to a point approximately 6 miles east of Osborne, all on the north side of the river. Woodston diversion dam is located 2 miles west of Woodston.

Description

Consists of Webster Dam and Reservoir with a 260,700 acre-foot capacity, the Woodston diversion dam, and the Osborne Canal, laterals, and drains, which will serve 8,500 acres of irrigable land, extending from 1 mile east of Woodston along the north side of the river to approximately 6 miles east of Osborne.

Benefit-cost ratio

1.15 to 1.0.

Summarized financial data

Estimated total obligations	$16,348,700
Total obligations to June 30, 1956	11,327,125
Total obligations, fiscal year 1957	823,375
Total obligations, fiscal year 1958	1,000,000
Balance to complete	3,198,200

On a cost basis the fiscal year 1958 program will total $1,020,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justifications	$17,123,000	$16,973,163
1958 congressional justifications	16,549,200	16,348,700
Decrease	573,800	624,463

The total estimated cost of the Webster unit has been decreased from $17,123,000 to $16,549,200. This change resulted from change of plan, eliminating land south of the river and substituting land requiring pump turnouts on the north side of the river, reduction of contingencies on Webster Dam, and provision for the contribution to the civil-service retirement fund.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$8,712,200
Recreation	43,000
Subtotal	8,755,200
Nonreimbursable:	
Flood control	7,778,000
Fish and wildlife	16,000
Subtotal	7,794,000
Total	16,549,200
Repayment of reimbursable costs:	
By irrigation water users	1,372,000
Repaid by surplus basinwide revenues	7,383,200
Total	8,755,200

Repayment costs per acre

Federal investment per acre:	
To be repaid by water users	$162.00
To be repaid by surplus basinwide revenues	863.00
Total	1,025.00
Annual water-user charges:	
Construction	4.10
Operation and maintenance (current prices)	4.00
Total	8.10

Repayment contracts

Construction of purely irrigation features is dependent upon the organization of an irrigation district, which is now underway, and the execution of a repayment contract. It is anticipated that a repayment contract will be executed in fiscal year 1957.

Physical data

Feature	Type	Capacity	Structural height	Length
Webster Dam and Reservoir.	Earthfill	260,700 acre-feet	158 feet	10,600 feet.
Woodston diversion dam	Concrete overflow		14 feet	150 feet.
Osborne Canal	Earth	161 cubic feet per second.		39.4 miles.
Osborne laterals	do	8,500 acre-feet		24.2 miles.
Osborne drains	do			34.3 miles.

Acres to be served

	Acres
Full supply	8,500
Supplemental supply	0
Total	8,500

Status

Construction of Webster Dam was started in November 1952. As of June 30, 1957, the dam will have been completed. Construction will have been initiated on the Woodston diversion dam, and all field data will have been collected and preparation of plans and specifications well advanced on the first section of the Osborne Canal and laterals. Field data will be well advanced on the second section of the Osborne Canal and laterals.

Work proposed, fiscal year 1958

Woodston diversion dam, $297,845.—The program provides for continued construction of the Woodston diversion dam to completion.

Osborne distribution system and drains, $699,955.—The program provides for the initial construction on the Osborne Canal and laterals, first section, and for the completion of collection of field data and starting the preparation of plans and specifications on the second section of the Osborne Canal and laterals and minor investigations on Osborne drains.

Transitional development costs, $5,000.—This amount is programed for settlers assistance costs.

Contribution to civil-service retirement fund, $17,200.—Initial-year contribution to civil-service retirement fund.

Other expenditures and credits, —$20,000.—Represents depreciation of equipment and service facilities acquired in prior years and scheduled to be distributed to project features in fiscal year 1958.

YELLOWTAIL UNIT

Chairman HAYDEN. The budget did not include any new funds for the Yellowtail unit. However, there was a slight carryover of approx-

imately $3,300,000 which the House committee directed to be used to finance other projects.

(The justification follows:)

Location

The Yellowtail Dam site is located at the mouth of the Bighorn Canyon, 45 miles southwest of Hardin, Big Horn County, Mont.

Description

Yellowtail Dam will provide a reservoir with a capacity of 1,375,000 acre-feet. The dam will regulate runoff for irrigation, flood control, power generation, and other uses. Storage allocations will include a minimum of 250,000 acre-feet to be used solely for flood control, with an additional 9,000 acre-feet as an operating margin allowance, and 250,000 acre-feet for joint use for flood control, irrigation, and power. Additional space of 358,000 is reserved for irrigation and power only, and the remaining 508,000 will provide dead storage for silt accumulation. All water releases except spillway discharges will be made through the powerplant which will have an installed capacity of 200,000 kilowatts.

Benefit-cost ratio

1.51 to 1.

Summarized financial data

Estimated total obligations	$86,062,000
Total obligations to June 30, 1956	612,146
Total obligations, fiscal year 1957	80,000
Total obligations, fiscal year 1958	3,307,854
Balance to complete	82,062,000

On a cost basis, the fiscal year 1958 program will total $2,182,854. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$95,721,000	$93,246,831
1958 congressional justification	88,952,000	86,062,000
Decrease	6,769,000	7,184,831

The total estimated cost of the Yellowtail unit has been decreased from $95,721,000 to $88,952,000. The change is mainly the result of a rfienement of quantities in the dam and equipment in the powerplant. The quantities and equipment in this estimate are based on specifications data.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$18,943,000
Power	64,335,000
Recreation	500,000
Subtotal, reimbursable	83,778,000
Nonreimbursable:	
Flood control	4,839,000
Fish and wildlife	335,000
Subtotal, nonreimbursable	5,174,000
Total	88,952,000

Repayment of reimbursable costs

By power	$64,335,000
By irrigation water users	----------
By surplus, other MRBP revenues	19,443,000
Total	83,778,000

Repayment contracts

Repayment of this segment of the Missouri River Basin project power system will be accomplished from sales of electric energy under existing and forthcoming contracts with preference customers and private consumers within the period required by law.

Physical data

Feature	Type	Capacity	Height	Length
			Feet	*Feet*
Yellowtail Dam and Reservoir	Concrete arch	1,375,000 acre-feet	518	1,445
Yellowtail afterbay dam	Earth fill	1,650 acre-feet	36	1,320
Yellowtail powerplant	4 50,000-kilowatt hydroelectric units.	200,000-kilowatt	----------	----------
Yellowtail switchyard	----------	----------	----------	----------

Status

Construction funds were allotted in fiscal year 1956, but actual construction on the Yellowtail Dam was not initiated due to the inabiltiy of the Crow Indian Tribe and the Government to reach an agreement on the value of the right-of-way required for the dam located on tribal lands.

In February of 1956, a petition for condemnation of the Crow tribal lands was filed in the United States District Court of Montana. In January 1957 the district Court ruled that the United States had authority to condemn Crow tribal lands. House Joint Resolution 2 and Senate Joint Resolution 12 have been introduced in the 85th Congress and would provide for a taking of the right-of-way and payment to the Indians.

Earl in fiscal year 1956 a contract was negotiated with the Wyoming Highway Department, which was then rebuilding Wyoming State Highway No. 14, to relocate the Bighorn River Bridge in the upper reservoir area consistent with reservoir operating elevations. As of June 30, 1956, this work was substantially completed. During fiscal year 1957 a minimum amount of design work continued preparatory to initiating construction in fiscal year 1958 as soon as right-of-way proceedings have progressed to the point where possession of the site can be obtained.

Work proposed, fiscal year 1958

Yellowtail Dam and Reservoir, $1,435,700.—Construction will start on the Yellowtail Dam as soon as right-of-way involving tribal lands permits possession of the site. Initial work will include a service road to the dam and excavation of the diversion tunnel, spillway, and dam foundation.

Yellowtail powerplant, $293,000.—Work will be started on the access road to the powerplant site at the base of the dam. Excavation work will be initiated for the powerplant foundation.

Yellowtail switchyard, $15,000.—A start will be made on constructing an access road to the switchyard area in conjunction with the prime construction contract for the dam and powerplant.

General property, $400,000.—Construction contracts will be awarded for access roads and minor items of equipment.

Contribution to civil service retirement fund, $41,300.—Initial year contribution to civil service retirement fund.

Adjustments, —$2,146.—Anticipated nonappropriation transfers.

Other expenditures and credits, $1,125,000.—Represents the requirements for temporary and permanent residences administration, and service buildings for use during the construction period. The cost of these facilities will be distributed to permanent property in future years.

NEGOTIATIONS FOR DAM SITE

Chairman HAYDEN. What is the status of your negotiations to acquire a dam site on the Yellowtail unit?

Mr. DEXHEIMER. There are bills pending before the Congress which would authorize the payment of $5 million to the Crow Tribe for the land in the vicinity of the Yellowtail Dam that is under tribal ownership.

There is also pending before the Federal court in Montana a case brought by the United States to acquire the lands of the tribe that are needed for the Yellowtail unit.

In the first proceedings under the Federal court case, the court determined that the Federal Government did have the right to condemn those lands. There was some question because of certain treaty rights.

The next step would be a determination and a hearing by the court as to the value of those lands, and then an order of taking, presuming that we deposited with the court, the amount that they determined was appropriate. We expect that will continue in the fall session of the court.

When we may get a decision, we do not know. As to the legislation pending before the Congress, the President vetoed a similar bill last year, and if this legislation still provides for a $5 million payment for that land, I would venture to guess that it might be vetoed again.

However, I do not know just what the status of that legislation is at the present time.

Chairman HAYDEN. Is there any need to retain these funds on this unit?

Mr. DEXHEIMER. We think that we probably will not need them for fiscal year 1958. Of course, as soon as this right-of-way problem is cleared up, we would expect to go ahead, we are prepared to go ahead with the contract for the dam and we would have to come in for an appropriation at that time.

Chairman HAYDEN. If the situation is all straightened out, you will have to come in and ask for some new money?

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. It is not important to retain this money, is it?

Mr. DEXHEIMER. No, sir; we think not for fiscal year 1958, but there again, however, we could find another place to put it.

Chairman HAYDEN. The House committee recommends the allowance of the budget estimate of $791,000 for the drainage and minor construction——

Mr. DEXHEIMER. Could I return to Yellowtail a minute?

Chairman HAYDEN. Yes.

Mr. DEXHEIMER. Under the House restriction, we would have no money at all for the Yellowtail unit. We would like to have a small amount of money to carry on these negotiations and our work with the court preparing reports and things of that kind in connection with this case.

Chairman HAYDEN. About how much?

Mr. DEXHEIMER. $50,000 would probably be adequate for our work.

Senator DWORSHAK. What kind of work are you doing?

Mr. DEXHEIMER. We have to prepare reports, Senator, as requested by the Justice Department, who are handling the case before the court. We have to prepare reports for the Congress on various questions, answer correspondence, sometimes attend meetings of the tribal council, and various minor things that need to be done.

Senator DWORSHAK. Have you completed all of the engineering work?

Mr. DEXHEIMER. Essentially, yes, sir.

DRAINAGE AND MINOR CONSTRUCTION

Chairman HAYDEN. The House committee recommended an allowance of budget estimate of $791,000 for drainage and minor construction. The justification will be included in the record, if there are no questions or comments from the committee.

Summarized financial data

Total obligations, fiscal year 1957	$1,824,835
Total obligations, fiscal year 1958	[1] 871,000

[1] Includes $8,400 contribution to civil-service retirement fund.

On a cost basis the fiscal year 1958 program will total $873,000. The narrative justification, which follows, explains the fiscal year 1958 cost program and the relation of costs to obligations.

Description

The drainage and minor construction program consists of those units on which all major construction has been completed except for facilities which are temporarily deferred or for which relatively small amounts of funds are being requested in the budget year for drainage construction, minor repair or replacement work, miscellaneous finishing activities, or preconstruction work on the temporarily deferred facilities.

Repayment

The entire cost of the comprehensive Missouri River Basin project that is properly allocable to irrigation, commercial power, and municipal water will be repaid in accordance with reclamation law. Costs properly allocable to flood control, navigation, and fish and wildlife are nonreimbursable. Costs allocated to irrigation and in excess of the water users ability to repay will be repaid from power revenues.

Work proposed, fiscal year 1958

The fiscal year 1958 program involves work on 10 units and the preparation of completion reports and as-built drawings. Three units will be inactive during fiscal year 1958.

Angostura unit, South Dakota, $142,000

Description.—The Angostura unit is located in the southwest corner of South Dakota on the Cheyenne River in Custer and Fall River Counties. The primary purpose of the unit is to provide full water supply to 12,154 acres of semiarid lands. Facilities of the unit are Angostura Dam and Reservoir, powerplant, switchyard, main canal of 30.9 miles, and lateral system, all of which are substantially completed. The powerplant has an installed capacity of 1,200 kilowatts.

Work proposed, fiscal year 1958.—The program provides for issuing specifications and awarding a contract for minor completion work on the canal system. Surface and subsurface drainage work will be in progress to protect the irrigated lands from seepage.

Boysen unit, Wyoming, $156,000

Description.—This unit consisting of Boysen Dam and Reservoir, 15,000-kilowatt powerplant and appurtenant features is located on the Bighorn River, in Fremont County in central Wyoming about 20 miles upstream from Thermopolis,

Wyo. All work is complete except for deferred construction on the relocation of the railroad.

Work proposed, fiscal year 1958.—The contract with the Chicago, Burlington & Quincy Railroad Co. for relocation of its tracks requires that the Bureau perform all unusual maintenance work for a period of 5 years after Boysen Reservoir had filled. The program for fiscal year 1958 provides for performance of such maintenance on the relocated railroad as may be required under the terms of the contract.

Canyon Ferry unit, Montana, $136,000

Description.—The Canyon Ferry unit is a multiple-purpose development which will provide for irrigation, the control of floods, regulation of the flow of the Missouri River, and generation of electrical energy. Facilities of the unit include Canyon Ferry Dam and Reservoir, a powerplant, and a switchyard, all of which are completed. The unit has an installed capacity of 50,000 kilowatts. Irrigation provided by the construction of the dam and reservoir will be in connection with the Helena Valley unit which will receive water pumped from the reservoir.

Work proposed, fiscal year 1958.—Additional right-of-way for lands affected by seepage from the reservoir will be acquired as operation of the reservoir indicates the need for acquisition.

Completion reports and as-built drawings, $10,000

Description.—Subsequent to completion of a project or a major segment thereof, it is necessary to prepare technical records of design and construction and as-built drawings for purposes of permanent records. These final records make available to Bureau engineers and others the procedures adopted and the experience gained in the planning, design, construction, and initial operation of the features or project. These records are of vital importance in cases of future alterations, rearrangements of machinery, emergency repairs, or replacements.

Work proposed, fiscal year 1958.—During fiscal year 1958, technical records of design and construction and as-built drawings will be prepared on completed separable features which have passed from the construction status to operation and maintenance status.

Crow Creek pump unit, Montana, $21,000

Description.—The Crow Creek pump unit is located in west central Montana along the Missouri River in Broadwater County. The primary purpose of the unit is to provide a full water supply for the irrigation of 5,020 acres of new land in the west central section of Montana. Facilities of the unit include a pumping plant and the necessary canals, laterals, and drains. Pumping power is supplied from Canyon Ferry powerplant. This unit was planned to replace on the tax list of Broadwater County an area equal in size to the area of agricultural land inundated by Canyon Ferry Reservoir. By the end of fiscal year 1957 all facilities except the drainage works will have been completed.

Work proposed, fiscal year 1958.—Construction of additional drains will be initiated during the year. Work will be continued on Settlers' Assistance.

Fort Clark unit, North Dakota, $6,000

Description.—The Fort Clark unit is located in Oliver and Mercer Counties in west-central North Dakota, on the right bank of the Missouri River, about 45 miles northwest of Mandan. The primary purpose of the unit is to provide a full water supply for the irrigation of 2,039 acres of new land. Facilities of the unit consist of a river pumping plant, two relift plants and a system of canals, laterals, and drains. By the end of fiscal year 1957 all facilities except the drains will have been completed.

Work proposed, fiscal year 1958.—Funds are programed for continuing the construction of drainage facilities as the need develops along with expansion of irrigation on the unit. Settler's assistance will continue to be furnished to farmers who need help on irrigation methods, etc.

Hanover-Bluff unit, Wyoming, $285,000

Description.—Hanover-Bluff unit is located in Washakie County in Northwestern Wyoming, and lies along the Bighorn River south of the town of Worland. The primary purpose of the unit is to provide a full water supply to 7,395 acres of irrigable land, 6,153 acres in the highland Hanover area, and 1,242 acres in the upper bluff area. Facilities include 6 pumping plants, 14.8 miles of new canals, 21.9 miles of rehabilitated and enlarged canal, and 19.2 miles of

laterals. The unit will derive water from the Bighorn River controlled by the Boysen Dam, which has been completed and is in service. By the end of fiscal year 1957 all facilities except the drainage works will have been substantially completed.

Work proposed, fiscal year 1958.—

Highland Hanover area: The program provides for completion of prime contracts, cleanup, and minor protective structures for the canals. Work under the prime contract, cleanup, and minor protective structures for the laterals will be completed. Design data will be collected, specification issued, and a drainage construction contract awarded. Settlers' assistance activities will continue throughout the year.

Upper Bluff area: The completion of prime contract will occur early in the fiscal year and cleanup and minor protective structures for the laterals will continue. The program provides for collection of design data, issuance of specification and awarding of a drainage construction contract. Settlers' assistance activities will continue throughout the year.

Heart Butte unit, North Dakota, $14,000

Description.—The primary purpose of the unit is to provide a full water supply for the irrigation of 13,100 acres of irrigable land, together with much needed flood protection for the city of Mandan and low-lying farmland in that vicinity. Facilities of the unit include Heart Butte Dam and Reservoir, which has been completed, 55 river pumping plants ranging in size from 3 to 50 cubic feet per second capacity, and a system of canals, laterals, and drains to deliver water to the irrigable land. Several relift pumping stations are also included in the plan of development.

Work proposed, fiscal year 1958.—The program provides for continuing the development of wildlife habitat areas as replacement of natural habitat inundated by Heart Butte Reservoir. This work is being accomplished under a working agreement with the North Dakota State Game and Fish Department. Settler assistance work will continue. Priming and puddling of laterals will also be continued.

Jamestown unit, North Dakota, $70,000

Description.—The Jamestown unit is located on the James River in Foster and Stutsman Counties in east-central North Dakota. The completed Jamestown Dam is about one-fourth mile north of Jamestown and the reservoir extends about 40 miles upstream from that city. It provides much needed flood control for Jamestown and other cities in North and South Dakota. It will impound return irrigation flows from areas of the Garrison diversion unit for diversion to irrigable lands along the James River and the Oakes section. The dam was so constructed that future connections can be made to provide a municipal water supply for Jamestown.

Work proposed, fiscal year 1958.—The program provides for completing the relief wells downstream from Jamestown Dam and continuing the relocation of Arrowwood Wildlife Refuge facilities.

Rapid Valley unit, South Dakota, $23,000

Description.—The principal purpose of the unit is to furnish a full supply of water to Rapid City and to Ellsworth Air Force Base. In addition, it will provide a full water supply to 2,200 acres of new lands under the Iowa Canal extension, furnish a supplemental water supply to 8,900 acres for the presently irrigated lands of the Rapid Valley project, and provide flood protection to Rapid City. Facilities of the unit consist of a completed 230-foot high rolled earth-fill dam 1,255 feet long with 2,100-foot earth dike extension, a 99,000-acre-foot reservoir, a diversion dam, a 31-mile extension of the existing Iowa Canal and a distribution and drainage system to serve the unit area.

Work Proposed, fiscal year 1958.—Completion of investigation and preparation of a definite-plan report for the irrigation facilities of the unit.

Shadehill unit, South Dakota, $10,000

Description.—The Shadehill Unit is located in northwestern South Dakota in Perkins and Carson Counties. The primary purpose of the project is to provide flood and silt control, municipal water and irrigation to lands lying adjacent to the Grand River. The unit at present consists of the completed Shadehill dam and reservoir only.

Work proposed, fiscal year 1958.—Research on the Shadehill development farm will continue throughout the fiscal year toward resolving the problem of quality of water by 1961.

Other expenditures and credits, —$2,000.—Represents costs for service facilities and stores which were incurred in prior years and will be distributed to facilities proposed for construction in fiscal year 1958.

MISSOURI RIVER BASIN INVESTIGATIONS

Chairman HAYDEN. The House committee recommended the allowance of $2 million for the Missouri River basin investigation, a reduction of $1 million from the budget of $3 million.

The Department is seeking a restoration. The justification will be included in the record.

(The justification follows:)

MISSOURI RIVER BASIN INVESTIGATIONS

Description

The Missouri River Basin investigation program consists of:

1. Unit investigations to determine the feasibility of and develop plans for individual units of the project which need authorization or reauthorization.
2. Advance planning consisting of detailed studies and preparation of definite plan reports as a prerequisite to start of construction on authorized units.
3. Basin surveys to evolve plans for subbasin development and to determine units worthy of more detailed investigations.

The activities of the Interior Missouri Basin field committee also are financed with Missouri River Basin investigations funds.

Summarized finanacial data

Total obligations, fiscal year 1957	$2,975,547
Total obligations, fiscal year 1958	3,000,000

On a cost basis the fiscal year 1958 program will total $3,000,000. The narrative justification which follows explains the cost program.

Status

Unit investigations.—In fiscal year 1957 unit investigation studies are in progress on 4 units and divisions including the Lavaca Flats unit in Nebraska for which studies are expected to be completed by the end of the fiscal year.

Advance planning.—In fiscal year 1957 advance planning activity is in progress on 11 units. Three of these, the Ainsworth unit in Nebraska, the Farwell unit in Nebraska, and the Shoshone extensions unit in Wyoming are expected to be ready for construction in fiscal year 1958. In addition, land classification needed in connection with a determination by the Bureau of Land Management regarding the disposition of public lands on the Shoshone unit will be underway.

Basin surveys.—The fiscal year 1957 program consists of 14 active investigations, of which 3, namely the Clarks Fork division in Montana, the Sun-Teton division in Montana and the Powder division in Wyoming and Montana, are scheduled for completion. In addition, basin reports will be completed for the Kansas River Basin and the North Platte River Basins although a small program of continuing work has been scheduled in future years to refine the plans.

Work proposed, fiscal year 1958:

Unit investigations

The fiscal year 1958 program provides for unit investigations on 6 units and divisions. Three of these represent continuation of planning work previously initiated. A description of each of these units and the fiscal year 1958 program is as follows:

Belvidere unit, Blue division, Nebraska, $40,000.—The Belvidere unit is located on the Little Blue River in Clay, Nuckolls, and Thayer Counties in south-central Nebraska. The Angus Dam and Reservoir would provide irrigation water to approximately 15,000 acres of lands susceptible of irrigation by means

of a canal extending from the reservoir to the project lands in the vicinity of Belvidere.

A reconnaissance report will be completed early in the fiscal year and, depending upon the results of those studies, the requested funds will be used to initiate land-classification analysis, preliminary engineering surveys, hydrologic studies, and cost estimates necessary for a feasibility determination for this unit.

Little Snake-North Platte division, Wyoming, $110,000.—This unit comprises an area on the western slope of the Continental Divide north of the Colorado line, drained by the upper tributaries of the Little Snake River; the water courses of Jack Creek, Encampment River, and North Platte River on the eastern slope; and from 7,000 to 18,000 acres of irrigable land in the Goshen Park area of Goshen County, west of Torrington, Wyo.

The plan contemplatess codecting surplus water from Little Snake Basin, transporting it into the North Platte Basin and making beneficial use of all or part of it on irrigable land in the Goshen Park area, and using a part of it to furnish a supplemental supply to existing projects.

These funds are scheduled to continue the engineering and economic studies underway in the prior year on the collection system on the western slope and on the distribution system for the Goshen Park area; study the Douglas Creek diversion to exchange water into the Laramie River Basin; prepare preliminary plans, designs, and estimates; make agricultural and economic studies; and prepare a reconnaissance report.

Nelson Buck unit, Kanaska division, Kansas-Nebraska, $25,000.—The Nelson Buck unit is located in north-central Kansas and south-central Nebraska on Beaver Creek in Decatur County, Kans., and Red Willow County, Nebr. The Nelson Buck Dam site is located approximately 2 miles southwest of Cedar Bluffs, Kans. Project lands are located in Beaver Creek Valley in the vicinity of Cedar Bluffs, Kans., and Beaver City, Nebr. The principal facility is the Nelson Buck Dam and Reservoir. The reservoir will furnish irrigation water for approximately 2,000 acres of new lands and provide flood-control benefits.

The funds will be used to initiate engineering, hydrologic, geologic, and agricultural surveys and to collect survey data for a feasibility determination on this unit. A brief reconnaissance report will be prepared early in the year; initiation and continuation of feasibility investigations will depend upon findings in the report.

North Loup division, Nebraska, $295,000.—The North Loup division comprises irrigable lands in the valley areas and on certain uplands of the North Loup River and upper reach of the main Loup River, in central Nebraska. Potential features of the division include two dams and reservoirs, a diversion dam and associated works, several pumping plants, and a comprehensive system of canals and laterals required to furnish a full irrigation water supply to about 67,000 acres of high quality land. Other potential benefits include recreation, fish and wildlife propagation, and possibly a small amount of flood control.

Much of the working during this fiscal year will be a continuation of the engineering and economic studies underway in fiscal year 1957, with heavy emphasis on finalizing the data and in completing preliminary designs and estimates on project features. Substantial progress will be made on canal and lateral designs and estimates, and a start made on plans and costs for drainage facilities. Drainage investigations will be made and plans developed for surface and subsurface facilities as necessary. Economic and agricultural studies will be carried along to completion and substantial progress can be made on the associated appendix reports. The appendix reports on all aspects of the development will be initiated looking to completion of the report in fiscal year 1960.

O'Neill unit, lower Niobrara division, Nebraska, $225,000.—The O'Neill unit is located in north-central Nebraska in the east third of the Niobrara River Basin. Principal storage facilities would be located near Meadville, Nebr., about 17 miles north of Ainsworth. The carriage system would begin at that point and carry water downstream to irrigable lands comprising about 66,000 acres lying on tablelands south of the Niobrara River in the vicinity of Atkinson and extending easterly beyond O'Neill.

The detailed engineering economic and agricultural studies under way will be continued. Much of the field data will be assembled and engineering analysis initiated. It is expected that much of the data will be in shape toward the close of the year so that a start may be made on preparation of the report on the unit, presently scheduled for submission in fiscal year 1960.

Transmountain diversions, Wyoming, $110,000.—This unit comprises an area on the western slope of the Continental Divide in Sublette and Sweetwater Counties which drains into the upper tributaries of the Green River, a tributary of the Colorado; the area east of the divide to the Sweetwater or North Platte Rivers; the watercourses of those rivers; and irrigable lands in the Goshen Park area of Goshen County.

The purpose of the investigation is to determine the feasibility of collecting water surplus to the present and future needs of users in the Green River Basin in Wyoming, transporting it into the North Platte Basin, and making beneficial use of it on irrigable land in the Goshen Park area.

The requested funds will be used to make a reconnaissance evaluation of the various transmountain diversion possibilities to select the best plan of development to initiate detailed studies. This will include location surveys of the canal and tunnel lines, reservoirs, dams and structures, hydrologic studies; geologic explorations; and land classification.

Advance planning

The fiscal year 1958 program provides for advance planning on 9 units of the project. On six of these units, investigations are expected to be completed. A description of these units and the fiscal year 1958 program for them follows:

East Bench unit, Montana, $10,000.—The East Bench unit, one of the several units in the Three Forks division, is located in the immediate vicinity of Dillon in southwestern Montana. The unit will include Clark Canyon Dam and Reservoir which is located on the Beaverhead River, a diversion dam, and a system of canals, laterals, and drains. These features will involve furnishing water for approximately 21,300 acres of full irrigation service land and 28,400 acres of supplemental service land.

Local interests have formed the Clark Canyon Water Supply Co., consisting of potential supplemental water-supply users, which, after incorporation, will contract with the United States. An irrigation district will be formed for the full-service lands.

By the end of the current fiscal year the definite plan report for this unit will be completed and the funds for fiscal year 1958 will provide for miscellaneous activities looking toward start of construction in fiscal year 1959.

Garrison diversion unit, North Dakota, $781,000.—This unit is located in the central and eastern portion of North Dakota. It includes 1,007,000 acres of new irrigation development in the vicinity of the Souris, Sheyenne, and upper James Rivers. An additional million acres of irrigation along the western edge of the Red River Valley may eventually be developed and become part of the unit. Water for irrigation and other purposes will be diverted from Garrison Reservoir into a regulating reservoir located on a drainage divide between the Souris, James, and Sheyenne Rivers. From this reservoir water can be released as needed for use along each of the three streams. A system of canals and pumping plants originating at the regulating reservoir will bring water to the higher lands along the streams. The plan will provide for restoration of Devils and Stump Lakes which, until quite recently, have been receding for many years. It will provide for pollution abatement and municipal water supply along the three rivers and in the valley of the Red River.

A unit report is to be completed in fiscal year 1957 presenting the general plan of development and its feasibility with detailed data for those features proposed for initial construction. In fiscal year 1958 the definite plan report on the first irrigation districts will be completed, and additional design data will be compiled for the principal supply work which will be the initial proposed for construction. Detailed land-classification and topographic surveys will be continued in areas scheduled for early development. Studies of the feasibility of extending irrigation into the Red River Valley will be underway. Feasibility of a development farm in Ransom County with a proposed water supply from the Sheyenne River will be investigated and establishment initiated if found feasible.

Great Falls unit, Helena-Great Falls division, Montana, $130,000.—The Great Falls unit, located along the Missouri River in the vicinity of Great Falls, Mont., will serve an estimated 24,700 acres of full-service land. The unit includes two pumping plants on the Missouri River, a river diversion, and the required canal and lateral systems.

These funds are needed to continue the topographic and land-classification surveys. Data for designs and estimates will be collected and agricultural and economic studies will be made for the definite plan report which is scheduled for completion in fiscal year 1960.

Hardin unit, lower Bighorn division, Montana, $30,000.—The Hardin unit, in Big Horn County, to the south and west of Hardin, Mont., will provide for the irrigation of more than 40,000 acres of benchland along the west side of the Bighorn River, about 4,000 acres on the east side, and supplemental water for about 1,800 acres now under ditch from Soap Creek. Irrigation water will be supplied from the proposed Yellowtail Reservoir, which will provide storage regulation. The irrigable lands lie at an elevation of 100 feet or more above the river, and diversion can be made at the Yellowtail Dam or by pumping at a point downstream. The possibility of diverting at a higher elevation to include additional thousands of acres of apparently arable land is also under consideration. A large part of the irrigable land is within the Crow Indian Reservation and largely owned by Indians.

By the end of the current fiscal year all fieldwork will be essentially completed. In fiscal year 1958, the definite plan report will be completed, reviewed, and revised if necessary.

Oahe unit, James division, South Dakota, $361,000.—Oahe unit is located in eastern South Dakota, with the greater portion of the land lying along the James River between the towns of Britton and Redfield in Spink, Brown, Day, and Marshall Counties. The remainder of the unit lies along the Missouri River in Sully County.

The tentative plan is to irrigate approximately 554,000 acres of new land with water diverted from Oahe Reservoir now being constructed by the Corps of Engineers on the Missouri River. The diversion works and water-supply system will consist of a pumping plant of about 3,700 cubic feet per second capacity lifting the water about 130 feet at Oahe Reservoir; the Pierre Canal, about 39 miles long, leading to Blunt Reservoir; and several main canals, totaling 292 miles, leading from Blunt Reservoir to the various main areas of the unit. Large drops along the anticipated canal routes will be used for power generation if determined feasible by further investigations. Several other reservoirs are included in the system for additional regulation of flows to meet irrigation demands.

An information-type report presenting the general plan of development based on the information now available has been completed and released to the local interest for their review and an expression of their interests and desires. On the assumption that there will be sufficient interest in the development to justify doing so, it is anticipated that detailed studies to refine the plan of development will be underway in fiscal year 1958. The funds requested will be used for topographic surveys and detailed land classification on four selected areas to firm up the previous land-classification figures for the unit. Work will begin on detailed lateral canal and drainage works layouts on the four selected areas. Studies of alternative locations of features of the supply system will be made and a firm plan established. Drainability of the lands will be studied in more detail, witht the view of firming up the cost estimate for drainage. All related aspects of the irrigation investigations will be studied in detail including land use, economics, and hydrology.

Almena unit, Kanaska division, Kansas, $10.000.—The Alema unit is located in north-central Kansas along Prairie Dog Creek in Norton and Phillips Counties. The principal facility is the Norton Dam and Reservoir. The Almena division dam will divert storage waters to irrigate approximately 5,000 acres of new irrigable lands by canas located on both sides of Prairie Dog Creek in Norton and Phillips Counties, Kans. Norton Reservoir will also provide flood control and a source of municipal water supply for Norton, Kans.

The definite plan report, which is to be substantially completed in fiscal year 1957, will be reviewed and revised as necessary. Assistance will be given local interests, as required, in the formation of a conservancy district, and negotiations for a repayment contract are scheduled. Information will be supplied to interested persons and organizations regarding the development of the unit.

Glen Elder unit, Solomn division, Kansas, $15,000.—The Glen Elder unit is in north-central Kansas on the Solomn River in Osborn, Mitchell, Cloud, and Ottawa Counties. The water supply for this unit will be furnished from the major feature of this unit, the Glen Elder Dam and Reservoir, near Glen Elder, Kans., which will furnish storage water to irrigate approximately 15,000 acres of new lands. It will also provide major flood-control storage capacity for the alleviation of floods on the lower Solomn, Smoky Hill, and Kansas Rivers and a source of municipal water supply for towns in the lower Solomn Basin.

Considerable work on this unit has already been accomplished, but, due to higher priority of other studies, the investigation was deferred. The funds for fiscal year 1958 are to be used to advance the studies to a point where final

selection of the dam site can be made and to compile the information gathered to date in a status report for local review and preservation. Further studies beyond that point will be dependent upon the results presented in the status report and the reaction thereto.

Kanopolis unit, Smoky Hill division, Kansas, $70,000.—The Kanopolis unit is located in north-central Kansas on the Smoky Hill River in Ellsworth, McPherson, and Saline Counties. The supply for this unit will be furnished from storage in Kanopolis Reservoir, constructed by the Corps of Engineers. The major features of the Kanopolis unit remaining to be constructed are the irrigation facilities to serve approximately 40,000 acres of land in the Smoky Hill River Valley. Approximately 86 miles of canal with the related laterals and drainage will be required to irrigate the proposed unit area.

This amount is requested to complete hydrologic studies, field investigations, economic studies, and plans and estimates for the distribution system, and to write and reproduce the field draft of the definite plan report for the Kanopolis unit. This amount will also provide funds to assist in organization of a conservancy district. The development-farm activities will be continued.

Narrows unit, Colorado, $5,000.—The Narrows unit in Weld, Morgan, Washington, Logan, and Sedgwick Counties includes a narrow strip of land along both sides of the South Platte River from a point just below Kersey, Colo., to the Colorado-Nebraska State line. The key feature for construction is a dam to be located on the South Platte River 8 miles west of Fort Morgan, Colo. The Narrows Dam will conserve flood flows and return flows which result from upstream developments, and will provide supplemental irrigation water for those portions of approximately 230,000 acres of currently irrigated land which experience chronic shortages and 30,000 acres now dry-farmed or partially supplied by pump irrigation.

By the end of the current fiscal year all fieldwork will be complete. The funds for fiscal year 1958 will provide for completion of a status report to present and preserve the information that has been collected to date pending a crystallization of local desires and needs.

Basin surveys, $602,128.—During fiscal year 1958, a major portion of the basin-survey program will consist of a continuation of surveys in 11 basins or subbasins. Of those, four will be completed by the end of the year. The four studies completed will be on the Bad division, South Dakota; the Bighorn Basin division, Wyoming; the South Dakota pumping division, South Dakota; and the Three Forks division, Montana. A reconnaissance report will also be completed on the Longs Peak division of the South Platte River Basin in Colorado, Nebraska, and Wyoming. Surveys will be initiated or resumed in three subbasins.

Contribution to civil-service retirement fund, $128,400.—These funds are required for initial year of contribution to the civil-service retirement fund.

Missouri River Basin Field Committee, $53,000.—These funds are required to finance the Missouri River Basin Field Committee which has the responsibility of coordinating the development activities of all the Department of the Interior agencies involved in the conservation and utilization of the resources of the basin.

Adjustments—$528.—Represents prior year expenditures for service facilities and supplies being charged to investigations in fiscal year 1958.

GARRISON DIVISION UNIT AND OAHE FUNDS

Chairman HAYDEN. Please comment on the need for these funds and especially those funds for the Garrison diversion unit and Oahe.

Mr. BENNETT. In reducing the investigation funds for the Missouri River Basin, the House committee directed that not more than $500,000 would be spent on the Garrison diversion unit and not more than $100,000 on the Oahe unit.

We covered in some detail this morning for Senator Young the situation on the Garrison unit. On the Oahe unit, which is a large potential development in central South Dakota, that work was essentially stopped in fiscal year 1957, because of the committees.

We were directed in fiscal year 1957 to complete our work on the Oahe unit with the funds given to us for this current fiscal year.

However, the only thing we were able to complete with the amount of money allotted was what we term our interim information report.

That report was completed and has been issued. It has served as the basis for a great many discussions within the State of South Dakota. They held a series of meetings with the farmers present who would have to pay for this water, to try and determine the extent of their interest.

STATE LEGISLATION

The State of South Dakota introduced legislation into their legislature which would authorize the creation of a conservancy type district. However, it was referred to a study group. They did not pass it at that time. They wanted more time for their lawmakers to give it adequate consideration, which it is now receiving by a special committee appointed by the Governor.

We expect that legislation to be back before the State when they reconvene in January. The $361,000 contained in our budget request would be for the purpose of reactivating that study. It is now essentially stopped.

Chairman HAYDEN. In your opinion, the study should be continued?

Mr. BENNETT. Yes, sir. We have spent a great deal of money on that already, without having yet reached a conclusive answer. We believe the project would be feasible and this looks like the interest in the State will be such as to warrant our going ahead with that work.

RESULT OF INVESTIGATIONS TO DATE

Chairman HAYDEN. What is it that you have found in the course of your investigations up until now that make it a different situation than what you find elsewhere?

Mr. BENNETT. Two things, Senator. One is its size. About 750,000 acres are involved in the project. Two, we found initially, that the lands we thought could be irrigated were not drainable. So we have had to shift the investigation considerably to the east of the original lands.

Chairman HAYDEN. Was that because what you originally looked at was an old glacier area?

Mr. BENNETT. Yes, sir. It is what they call glacial till lands. They look very nice on the surface, although they are somewhat pitted and marked with potholes.

Chairman HAYDEN. And water will not penetrate?

Mr. BENNETT. Water will go vertically, slowly. It will go down vertically, but those soils have no ability to transmit water laterally, so you simply cannot drain them.

LOCAL SUPPORT FOR STUDIES

Chairman HAYDEN. Is there sufficient local interest now that you should go along and continue these detailed studies?

Mr. BENNETT. To the best of our ability to judge that question, we think, yes. There were some 13 people, I believe it was, who came in before the House committee and testified vigorously to have the funds to continue and complete that investigation.

Chairman HAYDEN. Do they represent various organizations in the area?

Mr. BENNETT. They represent various organizations and the State. The Governor himself was there.

Senator MUNDT. If adequate funds are provided, when can the Oahe study be completed?

Mr. BENNETT. If adequate funds are provided, the study can be completed in fiscal year 1961.

RED WILLOW DAM

Chairman HAYDEN. Public Law 505 of the 74th Congress transferred the jurisdiction over the construction, operation, and maintenance of the Red Willow Dam, Nebr., from the Secretary of the Army to the Secretary of the Interior. This project is in the Republican River Basin, which is part of the Kansas River system. This law also called upon the Secretary to make an investigation and report as to the feasibility of the project. Can you give us the status of the Bureau's studies?

Mr. DEXHEIMER. Yes. A substantial portion of the fieldwork on the Red Willow Dam and Reservoir has been completed. We are now engaged in preparing feasibility designs and estimates for the dam and reservoir and associated irrigation canals and laterals, as well as hydrological and economic studies leading to the feasibility report required by Congress.

Chairman HAYDEN. If the report is not ready now, when can it be expected?

Mr. DEXHEIMER. We expect to have a final report on the Red Willow Dam and Reservoir completed by December of this year.

Chairman HAYDEN. Is the Bureau taking into account the flood control benefits that the Red Willow Dam will provide by protecting the irrigation works of the Frenchman-Cambridge district?

Mr. DEXHEIMER. The flood control benefits attributable to the Red Willow Dam and Reservoir which were determined by the Corps of Engineers do not include benefits for protection of the irrigation works of the Frenchman-Cambridge Irrigation District. This dam and reservoir, as well as the associated irrigation works, were in the original authorization and have remained a part of the plan of development of the Frenchman-Cambridge division. Protection of the irrigation works is considered as a necessary part of the development by the Bureau.

FUNDS FOR OTHER DEPARTMENTAL AGENCIES

Chairman HAYDEN. That same group appeared before us.

The budget estimate for other departmental agencies is $3,125,000. The House committee recommended $2.5 million, a reduction of $625,000 in the estimate. The Department is seeking a restoration of this reduction.

I will put the justification in the record.

(The justification follows:)

MISSOURI RIVER BASIN PROJECT

FISH AND WILDLIFE SERVICE

Summarized financial data

Total obligations to June 30, 1956	$3,452,759
Total obligations, fiscal year 1957	250,708
Total obligations, fiscal year 1958	[1] 275,000

[1] Includes $13,000 contribution to civil-service retirement fund.

Justification

A total of $275,000 is requested for investigation by the Fish and Wildlife Service in the Missouri River Basin. This amount will be used for studies of the effects of projects of the Bureau of Reclamation and Corps of Engineers on fish and wildlife resources in the basin and for the development of means and measures for the conservation of these resources. Funds are also needed to provide for necessary analysis of completed projects. All of these activities are closely related to development and evaluation of data on fish and wildlife resources of the Missouri Basin in relationship to water-development projects.

The estimate for fiscal year 1958 is consistent with the recommendation in the report of the Presidential Advisory Committee on Water Resources Policy. This report was transmitted to the Congress by the President on January 17, 1956. With respect to fish and wildlife in river-basin development, the conclusion of the Presidential Advisory Committee was that there should be a sharply stepped-up program of biological investigations of water-resources projects. The committee noted the lag in the intensity and scope in fish and wildlife investigations as compared with planning in the fields of irrigation, hydroelectric power, navigation, and flood control. The report notes that "There has not been sufficient planning * * * with respect to such functions as * * * preservation and propagation of fish and wildlife * * *."

This disparity between the planning effort of the Fish and Wildlife Service and the construction agencies has been particularly true in the Missouri River Basin in recent years. That basin, comprising one-sixth of the total land and water areas of the United States, contains some of the most important fish and wildlife resources in the Nation. The basin is widely famous, for example, for its big-game resources. Hunters in quest of such big-game animals as elk, moose, and antelope travel to the Missouri River Basin from all over the United States. The prairie and plains areas of the Missouri Basin are highly productive of waterfowl and pheasants. Several of the most famous trout streams in the country are found in the Missouri River Basin.

There is great demand on the part of residents of the Missouri River Basin for fishing and hunting opportunities and an unusually high percentage of these local residents depend upon hunting and fishing as their major recreational activities.

Profound changes in the habitat for both fish and wildlife are being wrought and will be wrought by the program of the Federal water-development agencies. There is a clear Federal responsibility to investigate thoroughly these changes in order to maintain fishing and hunting opportunities undiminished. This is particularly true in the light of the increases in industry and population and consequent increases in demand for fish and wildlife resources which is attending the development of the comprehensive Missouri River Basin project.

The funds requested for fiscal year 1958 will be utilized to continue vital investigations of the effects of water-development projects in places like the huge blocks of North Dakota which will be affected by the Garrison diversion unit, and the upstream reservoirs which the Bureau of Reclamation will bring into being in the next decade. Funds will also be used for a much-needed increase in the examination and analysis of completed units of the Missouri Basin project in order to determine the biological validity and results of conservation means or measures incorporated in those projects.

The Presidential Advisory Committee on Water Resources Policy has wisely recognized the urgent need for data of these types; the Fish and Wildlife Service proposed to respond promptly and step up its rate of data collection in the Missouri River Basin. The work by the Fish and Wildlife Service in the Missouri Basin for fiscal year 1958 forms a significant portion of the Department's interrelated program for the Missouri River Basin, carefully developed by the Interior's Missouri Basin Field Committee.

As in recent years, the principal effort by the Fish and Wildlife Service for fiscal year 1958 will be on the far-flung Garrison diversion unit in North Dakota. Investigations will continue with the object of developing means and measures to safeguard the important national wildlife refuges which will be affected by the irrigation plans, to develop means to compensate for the destruction by drainage of thousands of potholes which provide fine breeding grounds for the Nation's waterfowl, and to maintain and improve the area's stream-fishing resources.

The main-stem reservoir projects of the Corps of Engineers, which are producing terrific changes in fish and game populations, will require continuing and expanded attention. In all of this work, very close partnership relations, at some considerable expense to the Fish and Wildlife Service, will be maintained with the State fish and game departments. Moreover, the funds requested for fiscal year 1958 will facilitate the fulfillment of another major recommendation of the Presidential Advisory Committee by enabling the Service to maintain closer working relationships with other Federal agencies engaged in water-resources development.

GEOLOGICAL SURVEY

Summarized financial data

Total obligations to June 30, 1956	$28,854,554
Total obligations, fiscal year 1957	1,844,205
Total obligations, fiscal year 1958	[1] 1,840,000

[1] Includes $80,000 contribution to civil-service retirement fund.

Justification

The objectives of the Geological Survey under the departmentwide Missouri River Basin project are the collection, analysis, and interpretation of basic data on the water and mineral resources, and the preparation of topographic and geologic maps and reports, that are essential for the most practical and beneficial use of the water, mineral, and related land resources of the basin. Such basic information is needed by the Bureau of Reclamation and all other action agencies of the Government, as well as by the States and private industry, in planning, constructing, and operating projects for the development of the basin.

The work which the Geological Survey performs with these Missouri Basin project funds is of the same types as it conducts with its regularly appropriated funds. This additional work through the project funds is required because the needs of the Bureau of Reclamation and other agencies cannot be supplied through the survey's regular program alone. Although implemented to serve certain specific needs, the information so obtained is equally adapted to serving many other purposes characteristic of survey's products.

An increase of $80,000 is required for contribution to the civil-service retirement fund, in accordance with Public Law 854, 84th Congress.

Item	1957	Deductions	Additions	1958
(1) Topographic surveys and mapping	$1,118,535	$73,535	$50,000	$1,095,000
(2) Geologic and mineral resource surveys and mapping	54,877	1,877	2,000	55,000
(3) Water resources investigations	670,793	8,793	28,000	690,000
Total	1,844,205	84,205	80,000	1,840,000

(*1*) *Topographic surveys and mapping, $1,095,000.*—The utility and value of good topographic maps are widely recognized. They portray the character and relief of the terrain, the drainage system in all its intricate detail, and the principal manmade developments. It is hard to conceive of any use or development of natural resources that would not be benefited by such maps. They are essential for planning many engineering works, including those for irrigation, flood-control, hydroelectric power, transportation, soil conservation, and mineral development.

The primary objective of the topographic mapping program of the Geological Survey under the Missouri River Basin project is to provide the basic map information needed by the Bureau of Reclamation and the other action agencies of the Government in planning the development of the water and land resources

of the basin. The utility of the maps, however, is not limited to that purpose, because they serve equally well the many diversified requirements of all other public and private agencies that are engaged in the various phases of resource development and use. In addition to meeting the Missouri River Basin project needs, the maps prepared under this project fulfill the requirements of the national mapping program in those areas mapped, and are in accord with recommendations made under the national water policy.

The need for topographic mapping in the basin is accentuated by the fact that most of the proposed development projects are in areas sparsely covered by suitable maps. Continuation of the present mapping program is needed to insure that the maps will be available by the time the detailed planning of projects for any given area is to start. In this way maps will serve their intended purpose most effectively and the need for special surveys will be greatly reduced.

The mapping program under this project is planned in consultation with representatives of the Bureau of Reclamation and the other principal map-using agencies of the Government, and it is submitted to the Missouri Basin Field Committee of the Interior Department for comment. Only the most important and urgent needs are included, and these are provided in the order of their priority.

With the funds requested, topographic mapping in progress will be continued as follows: On projects containing 187 7½-minute quadrangles in Colorado, Iowa, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming all of the maps will be completed; mapping will be continued on 102 7½-minute quadrangles in Nebraska, North Dakota, and South Dakota. In addition work is expected to be initiated on 162 7½-minute quadrangles in North Dakota, South Dakota, Nebraska, Wyoming, and Montana and on 21 15-minute quadrangles in Montana and Wyoming.

The mapping is being undertaken primarily to serve the following needs: (*a*) providing basic data for hydrologic, geologic, and economic studies; (*b*) studies relative to irrigation; (c) flood control and power development; (*d*) planning for wildlife refuges and fire control; (*e*) classification of lands; (*f*) location of transportation routes; and (*g*) as an aid in stratigraphic and structural investigaions in the search for oil and gas.

(*2*) *Geologic and mineral resources surveys and mapping, $55,000.*—The objectives of geologic and mineral resource surveys and mapping under the Missouri River Basin project may be divided roughly into two broad categories.

The first category comprises the general service geologic mapping and investigations. These activities are conducted mainly in areas where important engineering works are planned by the Bureau of Reclamation and other action agencies of the Government, as well as by State and private agencies. Knowledge of the character of the terrain, of the unconsolidated surfical deposits and the underlying bedrock formations, and facts concerning the location, extent, and physical and chemical properties of potential construction materials, are essential to the proper planning of such works. In addition, the studies have wide application for a variety of other purposes, such as for delineating lands that would be suitable for irrigation or in the search for new mineral deposits.

The second category includes investigations that are pointed more directly to locating and appraising the principal mineral resources of the basin, such as coal, oil and gas, bentonite and other clays, phosphate, iron, and chromite. Development of these mineral and mineral fuel resources should go hand-in-hand with the large-scale development of the water and land resources of the basin if the full potentials of the region are to be realized.

Both these types of studies are being conducted under the Missouri Basin program and they supplement the regular program of the Geological Survey in these fields in that they further the preparation of the geologic map of the United States and make an important contribution to the development of the resources of the basin.

The activities planned for fiscal year 1958 are the continuation of mapping and studies in and around Great Falls, Mont.; continuation of geologic investigations of the Williston Basin oil and fias fields; preparation of a report on the Lenore area oil and gas fields; and continuation of geologic studies in the Whalen-Wheatland area of Wyoming.

(*3*) *Water resources investigations, $690,000.*—Adequate information defining the quantity and distribution of the surface-water supplies, the occurrence and availability of ground waters, the sediment loads of the streams, and the chemical quality of both the surface and ground waters, is indispensable for

planning, constructing, and operating all types of works for the development and use of the water resources of the Missouri River Basin. These include works for (*a*) irrigating arid and semiarid lands; (*b*) procuring water supplies for domestic, livestock, municipal, and industrial uses; (*c*) controlling floods; and (*d*) developing electric power.

Collection of such basic water-resources information by the Geological Survey should be started 5 to 10 years before the planning of projects is undertaken in order to provide dependable, long-term records that would record the changes in water supply resulting from the wide fiucutations in precipitation. This would furnish a better basis for appraising the quantity and quality of the water supply and thus reducing the likelihood of inadequate designs or excessive costs of construction and operation. The cost of obtaining adequate basic data will thus be saved many times over.

The funds requested for the basic water-resources investigations during fiscal year 1958 would provide for continuing a program about the same size as that for 1957. This would include about 158 stream-gaging stations, 40 sediment stations, and 62 chemical quality-of-water stations. Some substitutions in the present program would be made to meet the changing needs. Ground-water investigations would be continued in about 10 areas, and work would be started in about 5 new areas.

The basic water-resources investigational program is needed for—

(*a*) Planning new starts of development projects that may get under way during or soon after 1958 by the Bureau of Reclamation and other action agencies of the Government.

(*b*) Evaluating the effects of completed projects upon the quantity and quality of the water supply downstream from the project; and

(*c*) Planning for the long-range, basin-wide development program. Although some of the major dams and reservoirs are completed and in operation, and more will be constructed within the next few years, many more years will be required to complete the extensive irrigation and drainage systems and other water-development works.

BUREAU OF INDIAN AFFAIRS

Summarized financial data

Total obligations to June 30, 1956	$2,370,155
Total obligations, fiscal year 1957	181,450
Total obligations, fiscal year 1958	[1] 290,000

[1] Includes $14,000 contribution to civil-service retirement fund.

Justification

The work of the Missouri River Basin investigations project will continue to be geared to the basin-development programs of the Corps of Engineers and the Bureau of Reclamation which affect 20 Indian reservations in the Billings and Aberdeen areas with a population of nearly 60,000 Indians owning some 15,000,000 acres of land. Missouri River Basin investigations are primarily concerned with surveys, studies, and plans to cushion the unfavorable and to take advantage of the favorable effects of the Missouri River Basin developments on Indian people. This calls for continuing work in appraisal of Indian land, improvements and other property: aid and advice to Indians and tribal organizations in their negotiations for settlement and in programs for expenditure of funds received: land capability surveys of reservation lands: appraisals for consolidation of farm units, and compilation of land records as a basis for resettlement of families from taking areas: and social and economic surveys to aid in the rehabilitation of Indian families.

The demands for information and assistance in relocating and rehabilitating families will increase greatly at Cheyenne River and Standing Rock Reservations as the time for removal from the Oahe Reservoir draws near and rehabilitation funds are made available. The target date for closure of the Oahe Dam is July 1958.

The most pressing need is for work in connection with the construction programs of the Corps of Engineers. Congress has appropriated over $10.5 million for the relocation of some 180 Cheyenne River Sioux families from the reservoir area, for the rehabilitation of families resident on the reservation, and in payment for damages which will be sustained by Indians of the Cheyenne River Reservation. A comparable sum is expected to be appropriated for similar

purposes for Standing Rock Sioux Indians and lesser amounts for Crow Creek Sioux and Lower Brule Sioux Indians. The large amount of planning and service work required for relocation and rehabilitation programs has already necessitated the concentration of efforts of the Missouri River Basin improvement staff on problems arising out of these programs.

To facilitate the removal and rehabilitation of 350 Indian families from the Oahe Reservoir and to rehabilitate 100 families already displaced by the Fort Randall Reservoir will require an increase in activities, particularly those relating to rehabilitation plans for families, establishment of economic farm and ranch units, appraisals, and land-record work. It is estimated that $166,000 will be needed to carry out the Missouri River Basin improvement programs relating to Corps of Engineers projects.

Because of the more urgent demands for work relating to Corps of Engineers projects, work relating to Bureau of Reclamation projects has been curtailed during recent years. However, the Yellowtail Dam and Hardin irrigation units will require considerable attention in 1958 and lesser amounts will be needed for investigations relating to irrigation projects on other reservations. The Hardin unit contains about 29,000 acres of Indian land that is irrigable. It is estimated that $60,000 will be required for investigations relating to the Bureau of Reclamation projects during fiscal year 1958.

For general basin work and work relating to the Bureau of Indian Affairs, $50,000 will be required.

In addition to the program amounts outlined above, this estimate includes a request for $14,000, representing the amount required for contributions to employees' retirement funds under the provisions of Public Law 854, approved July 31, 1956.

BUREAU OF LAND MANAGEMENT

Summarized financial data

Total obligation to June 30, 1956	$3,407,392
Total obligations, fiscal year 1957	240,878
Total obligations, fiscal year 1958	[1] 270,000

[1] Includes $9,500 contribution to civil-service retirement fund.

Justification

1. *Land classification, $129,100.*—The increase over the amount available in fiscal year 1957 is $29,500 of which $6,100 is for contributions to the retirement fund leaving a program increase of $23,400. Classification and inventory of the public lands precedes development work by the Bureau of Reclamation, and other agencies, in order that the necessary coordination of land and water uses can be accomplished. Field data gathered is compiled in narrative, graphic, tabular, and cartographic report form and copies are provided participating and interested agencies. Such reports facilitate the orderly development and disposition of public lands and provide important land-use capability and suitability data, grazing capacity, recreation and wildlife, timber values, necessary to the proper integration of public lands with lands under other ownership.

The Missouri River Basin detailed land-classification program for fiscal year 1958 will continue to be concentrated in the North Platte River Basin, Wyo. In addition, reconnaissance surveys will be carried on in the upper and middle Yellowstone Basins and the Tongue River Basin, Mont., embracing an area of approximately 810,000 acres of public-domain lands, most of which lands are of scattered and isolated nature.

The fiscal year 1958 program also provides for completing field data on the Seminoe unit of the North Platte River Basin, but not publication of these data. Completion and publication of the report for the Milk River area, Montana, will be made during fiscal year 1958.

2. *Cadastral survey, $140,900.*—This estimate is the increase of $29,500 over fiscal year 1957 and includes $3,400 for contribution to the retirement fund leaving $26,100 increase for program work. This increase will provide for resurveys on 220,000 acres more than was provided for by the 1957 allotment.

Cadastral surveys are necessary to the basin program to provide accurate and official boundary on the public lands by legal subdivision; for securing rights-of-way for canals and reservoirs; and the laying out of farm units and to provide

horizontal control for mapping. It is therefore necessary that the cadastral survey work proceed well in advance of the requirements of the development agencies.

The 1958 program provides for work in Nebraska, North Dakota, and South Dakota as follows:

	Acres
Nebraska:	
Mirdan-Norwell unit	62,720
Oniel unit	196,000
Total	258,720
North Dakota	
Max Bass-Upham block	93,440
Sikeston unit	86,400
Total	179,840
	Acres
South Dakota: Oahe unit	182,740
Total	621,300

BUREAU OF MINES

Summarized financial data

Total obligations to June 30, 1956	$1,495,426
Total obligations, fiscal year 1957	117,133
Total obligations, fiscal year 1958	[1] 140,000

[1] Includes $7,000 contribution to civil-service retirement fund.

Justification

Missouri Basin project activities of the Bureau of Mines are being modified and reoriented with a dual objective: (1) To parallel more closely the new programs and needs of the construction agencies and (2) to recognize not only the Department's responsibilities for mineral resource development and conservation but also for pollution abatement and provision of adequate water for mineral processing and development.

Mineral inventories will be made on proposed reservoir sites of the Bureau of Reclamation to determine the effect of the reservoirs on the mineral industries in the area. Losses to the Nation resulting from inundation would be studied as well as the benefits.

The mineral industry is a vital factor in the economy of the basin and its importance in creating primary income is increasing rapidly. Some 45 mineral commodities are produced in the basin. Pertinent mineral information is needed by the water and power construction agencies involved in the Missouri River Basin project to assure that all phases of the economics involved in the planning of the several units are adequately considered. The information the Bureau of Mines compiles for them includes detailed data on grade, type, and location of minerals and fuels available, how they can be processed, at what cost, and the relation of the segments of the minerals industry to the Missouri River basin project.

The increase of $34,000 includes $7,000 for payments to the retirement fund as required under title IV of Public Law 854, approved July 31, 1956.

A serious water shortage has arisen in parts of the region, due to a series of drought years and increased demands for irrigation, domestic, and industrial use. Two water studies are programed, consistent with departmental objectives and the field committee's report that "the collection, analysis, and interpretation of basic water facts * * * lag far behind need * * *" The first study to provide prerequisite data for pollution abatement would be an inventory of waterborne industrial wastes of mineral origin in the region. It would determine the quantities and concentrations of significant mineral-industry wastes, which are discharged to the streams and ground waters of the region. The second and complementary study would be devoted to the conservation and reuse of water for metallurgical and other industrial purposes. It would test methods for removing harmful impurities or rendering the contaminants harmless, including aeration, sandbed filtration, chemical pretreatment, and use of ion exchange or

complexing agents. Engineering cost studies would be made to determine the best and cheapest method for preparing and recovering water suitable for plant use.

An investigation of nonswelling clays is programed to develop substitutes for bentonite that will be less expensive and equally satisfactory for use as canal and ditch liners.

NATIONAL PARK SERVICE

Summarized financial data

Total obligations to June 30, 1956	$2,488,298
Total obligations, fiscal year 1957	259,702
Total obligations, fiscal year 1958	310,000

Justification

(*a*) *Recreation plans and surveys, $101,050.*—The estimate of $101,050 is an increase of $9,550 over the amount included in the 1957 fiscal year allocation, and is needed to permit the Service to meet its responsibilities in the Missouri Basin. The Service is concerned with the conservation of, and planning for, outdoor recreation resources and, in particular, planning for recreation developments on Bureau of Reclamation and Corps of Engineers water control projects, and negotiating with the State for the administration of recreation features of reclamation projects. Of the increase requested, the amount of $5,790 is included to cover additional costs which will be required under amendments to the Civil Service Retirement Act (title IV of Public Law 854, approved July 31, 1956). The balance of $3,760 is needed to keep pace with the program of investigation and planning on the Bureau's projects.

The program of investigation and planning on Bureau of Reclamation projects is based on its program, and must be adjusted as its schedule of investigations, planning, and construction develops. Current advice from the Bureau indicates that the Service must study and report on 9 projects and finish up reports on 2 others. These will include 7 reconnaissance reports and 4 planning reports, including general development plans, covering a total of 19 reservoir sites. The purpose of these studies is to determine the impact of the projects on recreation resources of the basin, to evaluate recreation potentials of the project, and develop preliminary plans for public use they will receive. Advisory assistance will be provided the Corps of Engineers on their projects as requested.

The reservoir management planning program is expected to be more active in 1958 because of the number of reservoirs involved and because, under the revised agreement with the Bureau of Reclamation, the National Park Service is responsible for determining the appropriate agency and for negotiating agreements for administration of reservoir recreation areas. Based on the Bureau of Reclamation's program, it is anticipated that agreements will be negotiated covering recreation areas at 5 reservoirs and will be underway on 4 others. Followup assistance to administering agency and field review of development and management will present an increased workload since, by that time, an estimated 30 reservoir areas will be under previously negotiated agreements.

Broad planning studies will be necessary to follow up on the basinwide report which is scheduled for completion during the 1957 fiscal year. The increase of $3,760 is needed to assist in effecting the recommendations of the basinwide survey report. The object will be to work cooperatively toward carrying through on the recommendations, and in particular toward developing or bringing up to date State park and recreation area plans.

(*b*) *Archeological and historical surveys and excavations, $208,950.*—The estimate of $208,950 is an increase of $61,450 over the $147,500 allocation for the current fiscal year, and includes $1,710 to meet Service contributions to the retirement fund in accordance with title IV of Public Law 854, approved July 31, 1956. These funds are required to enable the Service, in cooperation with the Smithsonian Institution, to keep more nearly abreast of the salvage and preservation of archeological remains, many of which are rapidly disappearing because of the construction of dams in the Missouri River Basin. In 1958, the historical-archeological survey and salvage program will reach a critical stage, requiring maximum effort to prevent the further loss of valuable and irreplaceable data resulting from water control projects. Seventy percent of the estimate is programed for salvage operation by the Smithsonian Institution, and 11 percent for contract on a matching fund or Service basis with local agencies for further salvage operations.

The most important concentration of threatened historical and archeological values lies within the Oahe Reservoir area. Scientists are concerned that entire cultural complexes of key significance in reconstructing American prehistory will be lost when the Oahe Reservoir is filled. Closure is tentatively scheduled for 1958, and the sites are of such extreme importance, that to keep ahead of the flooding schedule, 62 percent of the estimate amount would be expended on Oahe sites at low impoundment level.

Other main stem reservoir projects are of comparable archeological importance. Big Bend (South Dakota) will require intensive survey and testing to determine the nature and extent of sites requiring later comprehensive excavation. Although Fort Randall and Garrison areas have already been partially inundated, several significant sites exposed through wave action and bank slump will require salvage operations. Furthermore, many archeological projects undertaken earlier in these areas still require extensive laboratory analysis and technical reporting.

In addition to major salvage efforts on the main stem, there are several reservoir projects scheduled for early completion which have been reconnoitered and which warrant intensive survey or selective archeological excavation in order that significant historic and scientific values will not be irretrievably destroyed. Yellowtail (Montana), Glendo (Wyoming), Pomme de Terre (Missouri), Red Willow (Nebraska), and Tuttle Creek and Lovewell (Kansas) are conspicuous among such projects.

EFFECT OF HOUSE REDUCTION

Chairman HAYDEN. Did the House committee allocate the reductions to the various agencies or was it a general reduction?

Mr. LARSON. Mr. Chairman, it was a general reduction, without allocation to the various functions of the other agencies of the Department, with one exception, that the archeological work of the National Park Service should continue as programed to provide for the work that is required particularly at the Oahe Dam before inundation by the Corps of Engineers.

(The following was submitted:)

Effect of $625,000 reduction in the public works appropriation bill made by the House in connection with other Interior Department agencies, Missouri River Basin project—Budget estimate and distribution of House allowance

Bureau	Budget estimate, fiscal year 1958	House allowance	Reduction
Fish and Wildlife	$275,000	$216,250	$58,750
Geological Survey	1,840,000	1,444,375	395,625
Indian Affairs	290,000	228,125	61,875
Land management	270,000	212,500	57,500
Mines	140,000	110,000	30,000
Parks	310,000	288,750	21,250
Total	3,125,000	2,500,000	625,000

FISH AND WILDLIFE SERVICE

The reduction of $58,750 would result in a decrease of $45,000 in fish and wildlife studies by the Bureau of Sport Fisheries and Wildlife related to the Garrison diversion unit of the Bureau of Reclamation. At the present time no detailed engineering studies have been conducted on any of the 62 fish and wildlife development areas and not even preliminary engineering studies have been conducted on 45 of these areas. Five of these fish and wildlife development areas are included in the principal supply works of the Garrison diversion unit where the Bureau of Reclamation has conducted studies of a definite project report level.

Detailed engineering and biological studies of the Garrison diversion unit will be needed during fiscal year 1958 to bring the level of planning by the Bureau

of Sport Fisheries and Wildlife up to that already achieved by the Bureau of Reclamation. A reduction in the funds for this work will result in a postponement of the completion of the fish and wildlife planning already needed by the Bureau of Reclamation and the Department.

The reduction would also result in the curtailment of fish and wildlife studies amounting to $4,000 on the Shoshone extension unit, $3,000 on the Yellowtail unit, and $1,000 on the Ainsworth unit of the Missouri River Basin project of the Bureau of Reclamation. While work on these units might be deferred, such a postponement would not be desirable from the standpoint of effective, overall planning. The remainder of the reduction of $5,750 would necessitate a curtailment in the study of small watershed projects of the Department of Agriculture, private power projects subject to Federal Power Commission license, and small reclamation projects. There is a backlog of work to be done in connection with these projects also, particularly those of the Department of Agriculture. A large number of small watershed projects requiring study by the Bureau of Sport Fisheries and Wildlife are being proposed each year. In addition, it is expected that studies will be required in connection with a number of small reclamation projects proposed under Public Law 984, 84th Congress.

GEOLOGICAL SURVEY

The reduction of $395,625 in fiscal year 1958 will result in a reduction in planned topographic mapping and water resource studies that are required for various planned construction projects. The collection and interpretation of basic data should proceed at a more adequate pace than would be possible if the cut is finally effective. The full budget estimate is required if the information that must be available for construction projects of the Bureau of Reclamation, the Corps of Engineers, and others participating in the development of the basin, is to be available in time.

BUREAU OF INDIAN AFFAIRS

The major effect of the reduction of $61,875, will be to curtail the planned expansion of the program to accelerate the work on the Cheyenne River and Standing Rock Recervations of moving Indian families and related activities. These families must be moved in connection with the flooding of certain areas by Missouri River Basin projects.

BUREAU OF LAND MANAGEMENT

The reduction of $57,500 in fiscal year 1958 will require a reduction of 150,000 acres of land classification in the North Platte Basin and will delay the publication of classification reports on finished fieldwork by 6 months.

Cadastral surveys in the area of the Jamestown Dam in North Dakota will be reduced by 150,000 acres. One out of four survey crews will be eliminated.

BUREAU OF MINES

The reduction of $30,000 would be applied to studies devoted to conservation of water resources. Especially affected would be a study to provide prerequisite data for pollution abatement involving an inventory of waterborne industrial wastes of mineral origin in the region. The study is to determine the quantities and concentrations of significant mineral-industry wastes, which are discharged to the streams and ground waters of the region. Another study now under way on a very small scale is devoted to the conservation and reuse of water for metallurgical and other industrial purposes. Also, the reduction would curtail the Bureau of Mines study of clays for use in canal lining. The purpose is to find a clay that will be cheaper or perhaps better than the bentonite often used now for lining canals to prevent seepage and loss of water.

NATIONAL PARK SERVICE

The proposed 1958 program is as follows:

Investigation and planning	$29,500
Reservoir management planning	22,500
Recreation basinwide survey	49,050
Total	101,050

[1] Excludes $208,950 for archeological investigations.

The reduction of $21,250 will practically eliminate the investigation and planning on Missouri River Basin projects scheduled for the 1958 fiscal year. Three permanent positions and general expenses of those employees engaged in this phase of the work will be eliminated. Only one full-time employee will be left to continue with a portion of the program.

It will be difficult to apply any part of the reduction to either of the other two phases of the program. Reservoir management planning will definitely be more active during the 1958 fiscal year because of the large number of reservoirs involved, and because it involves negotiating agreements for administration of reservoir recreation areas. Followup assistance to administering agencies will present an increased workload, since, by that time, an estimated 30 reservoir areas will be under previously negotiated agreements and field review and reports on development and management will be made on at least 15 areas.

Basinwide survey will require planning studies as a followup on the basinwide report which will be completed during the 1957 fiscal year. The objective will be to work cooperatively with the States toward effecting recommendations in that report and in particular toward development or bringing up to date State park and recreation area plans. Some commitments have already been made by this Service in carrying out this phase of the work in 1958.

POWER DEVELOPMENT

Senator DWORSHAK. Is that all on the Missouri River Basin?

Chairman HAYDEN. Yes.

Senator DWORSHAK. I would like to ask Mr. Dexheimer a few questions on the power development:

I have observed that much of the cost of the irrigation projects will be reimbursed to the Government from power revenues. At the present time, how much power is being generated in the Missouri Basin at Federal installations?

Mr. DEXHEIMER. I understand that at the present time there are about 400,000 kilowatts generated.

Senator DWORSHAK. And how many different generating facilities?

Mr. DEXHEIMER. Would you like me to go over the list?

REVENUE FROM GENERATING FACILITIES

Senator DWORSHAK. I did not care for too much specific information, but I am wondering how much revenue you are getting from these power-generating facilities, and how much has been set aside to pay for these irrigation districts.

Are these just paper repayments, or actually, are you creating power revenues which will be available to take care of these extensive repayments for irrigation projects?

Mr. DEXHEIMER. Well, Senator Dworshak, we, as you know, market the power from the Corps of Engineers powerplants as well as the ones that we build in the Missouri River Basin.

Senator DWORSHAK. Some of these are Army engineer powerplants?

Mr. DEXHEIMER. Yes, sir.

Senator DWORSHAK. And some are the Bureau's?

Mr. DEXHEIMER. The main-stem ones are the Corps of Engineers. That power is all put into the Missouri River Basin power pool.

INFORMATION ON POWER DEVELOPMENT

Senator DWORSHAK. At this point, instead of taking any of the committee's time, can you insert in the record a statement showing where power is being generated, how much revenue is derived from

the sale of this power, and what will be made available to help repay the cost of these irrigation projects?

Mr. DEXHEIMER. Yes, sir. We can submit that for the record. I might point out, Senator Dworshak, that in fiscal year 1956, the power revenues amounted to $9,942,719.

Senator DWORSHAK. Gross?

Mr. DEXHEIMER. Yes, sir. Our studies indicate that there are very adequate revenues and a surplus for those Missouri Basin projects, including the irrigation features and the amounts that are to be paid from power revenues, to more than take care of anything that has been built or that is contemplated in the near future.

(The information referred to follows:)

In fiscal year 1956 power was being generated on the Missouri River Basin project at Boysen, Kortes, Angostura, and Canyon Ferry plants of the Bureau of Reclamation and Fort Peck, Fort Randall, and Garrison plants of the Corps of Engineers. The total gross revenue in fiscal year 1956 from these powerplants was $9,942,719, and the net revenue was $3,871,606. This net revenue at the present time is all used to repay the costs allocated to commercial power. After the completion in 1970 of the additional planned powerplants of the project, it is estimated that net power revenues will repay with interest the investment allocated to commercial power in 41 years. The net power revenues at this time will have aggregated $2,071,165,857. In subsequent years, net power revenues will assist in repayment of irrigation projects in the aggregate amount of $2,173,522,000.

POWER MARKETING

Senator DWORSHAK. Where is most of this power being marketed?

Mr. DEXHEIMER. It is being marketed throughout the Missouri Basin.

Senator DWORSHAK. To preference customers or to non-Federal agencies?

Mr. DEXHEIMER. We are supplying first the preference customers so far as they are within reach of economical transmission distance, and to the full amount of our ability to serve them.

There are, of course, shortages that we are not able to supply, many of them supplementing their supplies from other sources.

Senator DWORSHAK. Are privately owned utilities getting a lot of this power from you, from your Bureau?

Mr. DEXHEIMER. Comparatively a small amount goes to private utilities, and only then when there is not a market that we can reach economically to serve preference customers.

Senator DWORSHAK. Is current production of power only a small part of what you visualize, say, 5 years hence or 10 years hence?

Mr. DEXHEIMER. That is correct. As the additional units at Fort Peck and other additional units come in at the dams and powerplants that are under construction now, that will be increased substantially.

DEMAND FOR POWER

Senator DWORSHAK. Do you have a demand available now or in the near future for this additional power, or will you have to create the demand?

Mr. DEXHEIMER. We have applications for a great deal more power than we will possibly be able to furnish even when these new plants are created and not nearly enough to supply preference agencies that have made application for the power.

Senator DWORSHAK. About what price is being charged for that power?

Mr. DEXHEIMER. It is 5½ mills, in the eastern division.

Senator DWORSHAK. Five and a half mills?

Mr. DEXHEIMER. Yes, sir.

Senator DWORSHAK. Delivered over your own transmission lines?

Mr. DEXHEIMER. To some extent over our lines and to some extent by wheeling arrangements with other transmission facilities.

Senator DWORSHAK. Do you have any instances wherein the non-Federal groups take delivery of power at the bus bar at these large plants?

Mr. DEXHEIMER. I believe not in the Missouri Basin.

Senator DWORSHAK. Thank you.

NEW CONSTRUCTION PROGRAM

Chairman HAYDEN. It was stated early in the hearing that the House committee approved a new construction program totaling $133,168,000 to be financed by $113,046,000 of new funds, and $20,121,177 of previously appropriated funds.

I would like to have Mr. Golzé analyze this $20,121,177 by projects, giving sources, stating whether it represents savings or deferred work, and, where possible, indicate what work will have to be deferred.

I have in mind this: We had a program, the Gila project, of $1,300,000 for the current year and $400,000 of it was put into the reserve. So your new program now shows $869,000 which means that you only have that much money to do $1,269,000 worth of work.

I do not just know how it will come out.

Mr. GOLZÉ. One effect of that might be, Mr. Chairman, that we would have to push into 1959 an equivalent amount of work. We would have to analyze it to see.

Chairman HAYDEN. If the work has to be done, and there are funds available it ought to be done. I cannot see what is the sense in pushing it over and pushing it over from year to year.

Mr. GOLZÉ. That is true. But where they take the carryover money and use it to replace new funds, it means something has to give. Our going work has first priority on that so the slippage, as we call it, from 1957 would be the work that would ordinarily be done first in 1958.

The availability of new money will determine what will be accomplished in 1958. So, if we are only able to spend the eight-hundred-and-some-thousand dollars in the program for Gila, there will still be about $400,000 worth of work yet to be done in 1959.

Chairman HAYDEN. Could you do it all next year if you had enough money?

Mr. GOLZÉ. If we had enough money, we could do it all in 1958.

Mr. DEXHEIMER. And I think we could do it at a saving in 1958 over what it will cost in 1959, Mr. Chairman, in view of our rising construction costs.

Chairman HAYDEN. I do not doubt that at all. If the present trend continues, you will pay more for materials and more for labor in 1959, than you will in 1958, just as you will pay more in 1958 than what you did in 1957.

Mr. DEXHEIMER. Yes, sir; with resultant difficulty with the payment problems, which are generally pretty well set by contracts, and which might have to be reviewed in some cases to reflect the additional cost that would have to be borne by the beneficiaries of the project.

I would like, Mr. Chairman, just as a general statement, to say that that $20 million simply means work that we did not complete for various reasons, that we did not let contracts for in fiscal year 1957, and it means again, that it would be postponed 1 year and perhaps more with at least a 4½-percent rise in cost each year.

It is all authorized work that needs to be done. This does not appear to me to be the proper or economical way to get that work done. I do recognize, however, the desire to keep the budget expenditures down, but I don't think in the long run, it becomes an economical way to do it.

ANALYSIS OF NEW CONSTRUCTION FUNDS

I would like, if the chairman wishes, to give you an analysis of where this $20 million comes from, how it appears, the amount that we already had in our budget submittal of $11 million of delayed work. This only delays work that much more.

Chairman HAYDEN. If we are going to adopt this kind of financing, it is imperative that every member of the committee and Senate understand exactly what we are doing. I wish you would submit that anlysis to the committee. It is something that, on its face, you could say to the public, "We are saving the taxpayers some money." You may be temporarily, but in the long run there is going to be more taxpayers' money used to complete these projects and it is going to be at a higher cost and with a greater burden on the people who ultimately have to make a repayment. That is perfectly clear to me.

Mr. DEXHEIMER. It is compounded, because some of these are charged interest during the construction period. If that construction period is dragged out, the interest on that money is compounded along with the increased cost. So it runs up the cost materially.

Chairman HAYDEN. If there is no further business, we will meet at 10 o'clock tomorrow morning and proceed with the upper Colorado River appropriations.

(Whereupon, at 3:55 p. m., the hearing was recessed, to reconvene at 10 a. m. on Tuesday, June 18, 1957.)

Mr. Hauenstein. Yes, sir, with resultant difficulty with the payment problems, which are generally pretty well set by contracts, and which might have to be reviewed in some cases to reflect the additional cost that would have to be borne by the beneficiaries of the project.

I would like, Mr. Chairman, just as a general statement, to say that this $20 million simply means work that we did not complete for various reasons; that we did not let contracts for in fiscal year 1967, and it means again, that it would be postponed 1 year and perhaps more with at least a 4½-percent increase in cost each year.

It is all authorized work that ought to be done. This does not appear to me to be the proper or economical way to get that work done. I do recognize, however, the desire to keep the budget expenditures down, but I don't think in the long run, it becomes an economical way to do it.

ANALYSIS OF NEW CONSTRUCTION STARTS

I would like, if the chairman wishes, to give you an analysis of where the $59 million comes from, how it appears. The amount that we already had in our budget submittal of $14 million of deferred work. This only deals work that takes time.

Chairman Hayden. If we are going to adopt this kind of financing, it is imperative that every member of the committee and Senate understand exactly what we are doing. Otherwise you would submit that under to the committee. It is something that, on its face, you could say to the public, "We are saving the taxpayers some money." You are in reality, but in the long run there is going to be more taxpayers' money used to complete these projects and it is going to be at a higher cost and with a greater burden on the people who ultimately have to make any repayment. That is perfectly clear to me.

Mr. Hauenstein. It is compounded, because some of them are charged interest during the construction period. If that construction period is dragged out, the interest on that money is compounded along with the increased cost. So it runs up the cost materially.

Chairman Hayden. If there is no further business, we will meet at 10 o'clock tomorrow morning, and proceed with the upper Colorado River appropriations.

(Whereupon, at 5:10 p.m., the hearing was recessed, to reconvene at 10 a.m. on Tuesday, June 13, 1967.)

PUBLIC WORKS APPROPRIATIONS, 1958

TUESDAY, JUNE 18, 1957

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to call, in room F–82, the Capitol, Hon. Carl Hayden (chairman of the committee) presiding.

Present: Chairman Hayden and Senator Young.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENT OF HON. HENRY ALDOUS DIXON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF UTAH

Chairman HAYDEN. The committee will be in order.

Congressman Dixon, we will be pleased to hear from you.

Congressman DIXON. Thank you very much.

Briefly, sir, my request is for an appropriation of no less than $33 million for the upper Colorado project. I am asking for a bit more than the budget request of $25,142,000 because there have been developments since the budget was drawn that I think should be called to your attention. My reason for asking this: First, the detailed planning reports of the Vernal and Paonia projects were not available when the budget was being prepared. They have since been completed and are now in the hands of the Commission of Reclamation. Second, we have spent $13 million very wisely on the project. Third, the contracts have been let and nothing can be saved by delay, only additional expenses can be incurred through delay. The wheels are rolling and rolling fully and to stop them would only cost us more money in the end and save nothing. In the fourth place, the winning bid on the Glen Canyon Dam was $108 million, an extraordinary saving under the estimaate of 25 percent of the entire cost of the dam. That really is a very encouraging factor and is ample evidence of the fact that we should push this instead of having it on a stop-and-go basis which would cost us more.

Chairman HAYDEN. Our experience in recent years has been putting off anything of this nature costs more in the end.

Congressman DIXON. When you have a bid that is a $27 million savings under the estimate, that, in my opinion, is a happy situation.

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APPROPRIATION FROM RECLAMATION FUND

And, now, in the fifth place, the money that we are asking for would not come out of the taxpayer's pocket to any appreciable extent because it comes from the reclamation funds which was earmarked by Congress for this purpose.

And, sources within the 4 upper basin States, New Mexico, Colorado, Utah, and Wyoming contribute about $25 million a year to the reclamation fund.

This is not like most appropriations which are Federal grants; this is a loan. The Flaming Gorge Dam will be paid back in full and it will pay back interest on 51 out of the 57 million dollars.

The Glen Canyon Dam will be paid back, all but one-half of 1 percent of the principal. Interest will be paid on 281 million of the 298 million. So, it is tantamount to a loan with interest.

BENEFITS FROM PROJECT

The benefits from this project are going to be far greater than we expected a year ago when the authorization was made. Oil and gas discoveries in the Aneth Basin give evidence that this will become one of the largest producing areas in the whole United States, and those developments have commenced since the authorization.

In order to exploit that great mineral wealth it is necessary to have more water and power.

Delay in appropriations will save nothing, cost more and put off the time when income will come pouring back to the Treasury from the sale of power from the dam. The quicker we get them running the faster we will enlarge tax revenues from the new industry and the agricultural transformations of the affected areas.

I have a special brief for those two projects that were omitted from the budget. The Vernal unit, for instance, is most necessary because Vernal is 122 miles from a railroad. It is a big stockraising country. It is very expensive to get the feed grains in there because they have to be imported. They have not had sufficient water for 20 years and the bill for drought relief is mounting.

If we had $750,000 or a million dollars to start that unit it would not take long to build it and what we are spending for drought relief would actually be saved. I am under the impression it would be a good investment. It would give that area a chance to prosper and to pay taxes rather than accept drought relief. They need water and it would not take long to get it.

Now, that in brief, Mr. Chairman, is why I am asking for a $33 million appropriation.

I sincerely thank you for the privilege of appearing before you today.

Chairman HAYDEN. Thank you for your appearance.

Senator Anderson, I believe you have a statement to make to the committee.

Senator ANDERSON. Yes, Mr. Chairman.

STATEMENT OF HON. CLINTON P. ANDERSON, UNITED STATES SENATOR FROM THE STATE OF NEW MEXICO

NAVAHO IRRIGATION PROJECT STUDIES

Senator ANDERSON. Mr. Chairman, first of all may I read a telegram from Mr. John H. Bliss of the Upper Colorado River Commission for New Mexico?

Chairman HAYDEN. Yes.

Senator ANDERSON (reading):

Senator CLINTON P. ANDERSON,
United States Senate,
Washington, D. C.:

Re my letter of June 13 on Colorado storage project appropriations request that $300,000 be included for continuing Navaho irrigation project studies. We presented testimony before House committee on this item last month. Copy of statement follows by airmail.

This telegram is, as I said, signed by John H. Bliss, Upper Colorado River Commissioner for New Mexico.

I would like to ask, Mr. Chairman, when this statement arrives that it be incorporated in the record at this point.

(The statement was not submitted in time for printing.)

Chairman HAYDEN. Yes, Senator Anderson; that will be done.

AERIAL SURVEY

Senator ANDERSON. With reference to this $300,000 the chairman will remember we tried to get an aerial survey so the land could be examined. Some of this land was composed of narrow fingers of land in the San Juan County and where the cost ran up to an exorbitant figure, and we were going to exchange this for other solid ground and eliminate all those narrow fingers of land. In order to do that it is felt desirable to have an aerial survey, and at one time, I requested $500,000 for that.

The Indian irrigation people have been making some shopping days, bargain days, and we found the people who are surveying this for some of the oil companies and who have already done a great deal of aerial surveying for the oil companies, and people who are interested in the development of natural gas have a great deal of information and for about $300,000 can transform it into what the Navaho people and people interested in that project would want. We feel that we must do this. It will save the Government millions of dollars over the original estimated cost to develop these narrow fingers of land. In addition it will save the Government money because, by the terms of the upper Colorado storage bill, the Navaho lands are to be nonreimbursable as long as they remain in Indian ownership. If the money could be made available it would be very helpful.

The chairman was kind enough to try to assist me to get this problem into shape at one time. Although the Department of the Interior was quite willing to make the transfer the transfer of funds encountered objections.

UPPER COLORADO RIVER STORAGE PROJECT

Mr. Chairman, I am here once again to discuss the mattter of appropriations for the upper Colorado River storage project.

My State is greatly concerned, along with the other States of the upper Colorado River Basin. Mine is a continuing interest as evidenced by my activities in the 83d and 84th Congresses and through my statements which appear on page 198 of the Senate public works appropriations hearings for 1957 and on page 628 of the public works appropriations hearings for 1958 for the House Appropriations Committee. I was one of the authors of the act which authorized this project and I hope to be heard many more times on this matter until unified upper Colorado River Basin development becomes reality.

There are several things which could be discussed in detail but I will not burden the committee to that extent at this time. I have a statement which I will submit for the record to cover these points. By way of introduction, however, I would like to make the following suggestions, either for the language of the Appropriations Act or for the committee report covering these appropriations.

1. These appropriations are, in effect, lump-sum allocations to the upper basin. Thus, it is conceivable that some of the money appropriated for individual projects could be transferred to another project within the basin. I do not think this is contemplated to any damaging extent. However, I do feel that some guaranty should be written into the language of the law or report so that funds appropriated to these projects will be spent on the project for which money is appropriated.

NAVAHO DAM

The House Appropriations Committee has recommended $1.8 million for the Navaho Dam during fiscal 1958. This is the amount requested by the Bureau of Reclamation in its budget and the amount recommended by the Governor of New Mexico. I think it is only half of what should be appropriated to the project.

Perhaps the committee will recall that the House Appropriations Committee reduced the overall estimate for 1957 so that it included only $85,000 for planning on Navaho Dam. The history is that the appropriation later was raised to $800,000 and somehow the Bureau of Reclamation has been able to use all of it with the exception of $45,000 which will be unobligated at the end of fiscal 1957.

I believe emphatically that an appropriation of $3.5 million should be made for fiscal 1958 for Navaho Dam, as you will note in my prepared statement to follow. I base my request for $3.5 million on the fact that it represents 10 percent of the estimated cost of the dam and will permit a contractor to make a significant earning on a contract for fiscal 1959, which cannot be done under the present plan.

Mr. Chairman, on page 692 of part I of the House public works appropriations hearings for 1958 Mr. Evins and Mr. Dexheimer discussed a communication from the President, the Bureau of the Budget and the Secretary of the Treasury, recommending that all of these projects be deferred if possible. Mr. Dexheimer points out that it

is "very essential" to get these first storage dams and powerplants built at the earliest possible time so that the power revenues can reimburse the Treasury for the funds expended to build them. I concur most strongly in this viewpoint. If this project is built as envisioned in the act at as rapid a pace as possible, all but $8 or $9 million will be reimbursed and the project will be realized at as low a cost as possible. The project does not contemplate taking $900 million permanently from the Treasury, but rather about $9 million. This latter amount cannot be a serious threat to the economy of the country, but further delay in getting the project going can be serious.

It has come to my attention that a maximum of $25 million for construction of this entire project is contemplated for fiscal 1958. Mr. Chairman, this is an absolute minimum figure. In my opinion the minimum should be $33 million to permit economic progress and normal contract earnings on a project of this scale.

May I say that I understand the very able senior Senator from Utah, Senator Watkins, has a little higher figure than the $33 million, and I can say only that his later information justifies the raise in that figure from $33 million and I want it understood that I want to be on his side rather than stay with the $33 million figure.

Some people have criticized this project because it contemplates bringing new lands into cultivation. They point to present crops in surplus. I have been privileged to point out on several occasions that the lands under this project very likely could not and most certainly will not produce crops of the type now in surplus. This is because of climate, altitude, and other factors.

Senator WATKINS. Will the Senator from New Mexico permit me to ask a question at this point?

Senator ANDERSON. Yes, certainly, Senator Watkins.

Senator WATKINS. Isn't it true that Congress wrote into the bill that we could produce certain crops?

Senator ANDERSON. They did set forth certain crops that could be produced within a 10-year period and there is a 10-year limit on them, and someone may say as soon as the 10 years is up they will start a glut on the market. However, I believe the 10 years will come and pass and the succeeding generations will live on this land and they will not contribute to the agricultural surplus that may exist in the United States.

IRRIGATION OF NEW LAND

Senator YOUNG. Is all the new water to be gained from this project to be used for irrigating new land and to give supplemental water to existing areas?

Senator ANDERSON. I would say to the Senator from North Dakota it will depend upon the areas. This irrigation project now will receive supplementary water.

There is an area in the State represented by my friend, Senator Allott of Colorado, which may, in the exchange of water, give a little supplementary water. In his State he has had some water problems also.

INDUSTRIAL PLANTS

In the Navaho project it will all be new land. However, I point out to the Senator from North Dakota that in the last few months the Utah Construction Co. has gone to the Navaho Nation and asked

a Navaho Tribal Council for a 99-year lease under the industrial plan. It may be found that the highest use this water can have in this particular area is for the construction of industrial plants and a reduction to some degree of the Navaho irrigation project itself.

So I say to the Senator from North Dakota I cannot answer him as to one particular question.

A great deal of this water will go to lands already in cultivation and it is just possible that with the development of the oil industry—we had a mention of it here this morning—that the construction of the petroleum-chemical plants the construction of oil refineries, and gas booster stations, and all the rest of it will build up an industrial community that will make it desirable to use a great deal of this water for domestic and industrial purposes and probably will completely remove a great deal of the worry people had about the agricultural application.

Senator YOUNG. Is the water to be stored under this project now being wasted as runoff water into the Gulf of California?

Senator ANDERSON. Let me say it is going down to the lower basin States to give, particularly to the State of California, a little more water than it limits itself to. The higher use of this water would be to have it in our States. I might also add that a great deal of this water is actually going to waste. It is going into the salt sea, dumped into the Gulf of California. We are not utilizing it all by any means.

The great Glen Canyon Dam itself and the Navaho Dam, which is a regulating dam, and solely for the purpose of regulating the streams, are chiefly useful, I think, for guaranteeing to the States of the lower basin that they get the water the compact said they would get, and I believe it will remove a great deal of the controversy that now exists in the lower basin once the water supply is secured.

Senator YOUNG. I am all for you, of course, and I do not know of any area in these States that could make better use of it.

USE OF WATER BY CALIFORNIA

Senator WATKINS. Mr. Chairman, the fact is that the State of California has not been able to use the water that is allocated to it, that is, for consumption uses. They are using a lot of water for power that is not a consumptive use. Most of the water allocated to the upper basin States goes into the Gulf of California.

Senator YOUNG. Off the record.

(Off the record.)

Chairman HAYDEN. On the record.

Will you continue, Senator Anderson.

Senator ANDERSON. But there is a further fact which makes this worry vitually absurd. That is the provision within the act which forbids delivery of water from any of the storage units to lands which are producing crops which then may be in surplus. This was so stated by Mr. Bennett, of the Bureau of Reclamation, before the House committee on page 697 of part I of the House Public Works Appropriations Hearings for 1958.

STATUS REPORT ON NAVAHO DAM

Mr. Chairman, I would like to ask that the remainder of my statement—the prepared portion—appear in the record. It is largely

the same request that I have been making over and over again. Also, I would like to refer the committee to a status report on Navaho Dam which appears on page 629 of part II of the House Public Works Appropriations Hearings for 1958.

Also included in my statement before the House committee, on page 631 of the House Public Works Appropriations Hearings for 1958, is a letter from Paul Jones, chairman of the Navaho Tribal Council. The letter is addressed to the President and refers to the interest of the Navaho Indian Tribe in an early development of the proposed Navaho irrigation project. If Members are so inclined I believe it worthwhile that they read this letter.

PREPARED STATEMENT

I would like, Mr. Chairman, to have the rest of my statement put into the record at this point.

I thank you, Mr. Chairman, and members of the committee for allowing me this privilege of appearing before you.

(The statement referred to follows:)

There are three phases of the upper Colorado River storage project with which New Mexico is greatly concerned, although my State is interested in the early and unified fulfillment of the reclamation and power potential of the upper Colorado River Basin as contemplated by this project.

The first phase in the project of direct interest to New Mexico in Navaho Dam for which Congress appropriated $800,000 to initiate construction in fiscal year 1957. This intent was made clear in the Public Works Appropriation Act for 1957.

The second point of concern to New Mexico relates to the Navaho irrigation project, one of the so-called participating units of the upper Colorado River storage project. It is my understanding that a supplemental report constituting a recommendation for this unit is pending before the Secretary of the Interior at this time.

The third phase of concern to New Mexico involves the San Juan-Chama diversion which has been accorded priority by the upper Colorado River storage project.

My reason for appearing before you today is to lay before the committee my thinking on these three phases of the upper basin development as they relate, not only to the whole basin development, but to their particular effects upon the economy of my State.

As a matter of general policy, it is my belief that construction of all phases of this project should be coordinated to the end that the project as a whole reaches completion in an orderly and unified way. On the other hand, it is my belief that planning and programing for this project should not proceed on a piecemeal basis.

For a plan to be successful it must have a point of beginning. Insofar as New Mexico is concerned, the point of beginning for the upper Colorado River storage project is Navajo Dam. This unit has been authorized. The remaining two phases have not. Money has been appropriated and spent on this project.

Last year, when appropriations for this unit were being discussed, I expressed the hope that it would be possible, on the basis of money then being appropriated, to award a contract for the construction of this dam by late fiscal year 1957. Now I understand that the Bureau of Reclamation contemplates waiting until late in fiscal year 1958 to award a contract. This plan contemplates issuing specifications and a call for bids about February 1958 with a contract award in April of 1958. Thus, it will not be necessary, if this planning prevails, to request an appropriation of more than $1.8 million at this time. If a contract is awarded in April of 1958, a contractor would not be able to earn much money on the contract until the end of the fiscal year.

The question naturally arises: Why delay work on this relatively small structure, which is primarily for irrigation storage and which is at a planning stage more advanced than many others with the exception of Glen Canyon Dam? The

estimated cost of the dam is $36,887,000. If bids on it should fall 15 to 20 percent below estimate, as they did in the case of Glen Canyon Dam, there is even less reason in my mind to put off the advertisement for bids and the early signing of a Navajo Dam contract. In the year which has passed, various preliminary funds were expended on the project. In addition, the State engineer of New Mexico, the Bureau of Reclamation, and the Office of Indian Affairs have agreed on a 1,700,000-acre-foot capacity for the Navajo Dam Reservoir. Thus, there are no major obstacles in the path of this dam. Mr. Chairman, in view of these circumstances, further postponement of advertising for bids and award of a contract for Navapo Dam will constitute a mystery which will require explanation by those who have it in their power to proceed.

The fiscal 1958 budget includes a request for $1,800,000 for contracts for Navajo Dam. This, I am told, would permit completion of an access road—which I understood was to be built from funds appropriated for fiscal year 1957—and will cover the cost of an administration building, water supply, and so on, with a very small allocation remaining for the dam. Thus no real work can begin until fiscal 1959.

Mr. Chairman, I think that a minimum of $3.5 million should be appropriated for fiscal year 1958 in order to institute a normal economic program for construction of Navajo Dam.

There is a compelling reason why further delay in starting work on the dam itself should not be permitted. Already it is being said that there is no hurry in building the dam because the water which it will impound cannot be used until canals and ditches planned under the Navajo irrigation project have been completed. May I observe, Mr. Chairman, that canals and ditches are much more quickly built than a dam of this size.

Time will be needed to store water behind the dam before there will be any use for ditches. Since the dam has been authorized, and it is possible to appropriate money for its construction, it seems pointless to argue that work on the dam should not begin until the ditches could be built.

There is further consideration for an early start on the dam: municipal and industrial use of water which would be stored in the Navajo Dam Reservoir. The city of Farmington can absorb some of the water stored in the reservoir, and it is my understanding that a number of industrial firms are merely awaiting adequate water before locating downstream from Navajo Dam. In addition, water stored by this unit will make possible the transmountain diversion contemplated under the act. Water thus diverted will be added to the middle Rio Grande supply, upon which the city of Albuquerque draws so heavily. Thus, there will be a demand for water from Navajo Dam Reservoir even if there are no ditches ready within the irrigation project at the time water is first available.

I do not intend what I have said to be interpreted in any way which would indicate that I favor a delay in the construction of these canals and ditches. Rather, I cannot emphasize too strongly my desire that they be completed as nearly simultaneously as possible with the dam and the impoundment of waters in the reservoir.

Further, I do not wish it to be said that there is no need to begin work on the irrigation project because construction is proceeding so slowly on the dam. Both dam and irrigation project will suffer if one or the other of the units is delayed.

The Navaho irrigation project phase also will require some money in fiscal 1958. It is my understanding that a recommendation now is pending before the Secretary of the Interior which calls for detailed planning and construction of the irrigation unit by the Bureau of Reclamation. As you know, this project includes 110,630 acres of irrigable land, most of which lies on the Navaho Indian Reservation.

Not long ago I asked the Commissioner of Indian Affairs whether or not his Department favors transfer of responsibility for the detailed planning and construction phases of the project to the Bureau of Reclamation. He replied that there has been no official decision to date that the project should be handled in this manner, but that the Indian Service would pose no objection if the Bureau of Reclamation were given this responsibility. It seems to me that the building of this project, while of primary benefit to the Navaho Indian Tribe, rightfully belongs with the Bureau of Reclamation because of the ex-

perience and competence of its staff to handle projects of this magnitude. Therefore, such funds as may be required to enable the Secretary of the Interior to act on this recommendation and permit the Bureau of Reclamation to proceed at once with the planning necessary to the early authorization of construction of this unit should be available as early as possible. The Navaho Indian Tribe urgently needs this irrigation project to aid its economic rehabilitation and development. In my opinion, not less than $500,000 should be included in next year's budget as investigation funds to advance the definite project plan so that irrigation construction will be underway by the time the Navaho Dam begins storing water for this purpose.

We are not yet at the point where it is possible to define the requirements for planning on the San Juan-Chama diversion as we have for the first two projects we have been discussing. Still, I think funds should be made available not later than fiscal year 1959 for detailed planning on this project. It is my understanding that the 1959 budget limitations now are being formulated by the Department and that, in this preliminary thinking, figures for Navaho Dam construction approach $11 million.

I might add here, Mr. Chairman, that the total Navaho Dam construction will run $30 million over a 3- or 4-year period once construction earnings begin on the actual structure. Thus, it is planned that $11 million be appropriated for the first year, $12 million the second year, and $10 million the third year. It would not be too difficult to speed up the building plan so that this money can be spent in fiscal 1958, 1959, and 1960, as this committee intended last year in discussing this legislation.

Mr. Chairman, I have raised three questions so far:

1. Can the contract for Navaho Dam be awarded yet? From an engineering standpoint, the answer is "Yes." From an appropriation standpoint, the answer can be "Yes."

2. Can a supplemental report on the Navaho project be speeded? The answer here, too, should be "Yes," if necessary funds are provided.

3. Can as many contracts as possible be signed so that we may make progress in a unified, orderly, and economic manner? The answer to this question can be "Yes," provided funds are made available.

Mr. Chairman, I have said that, in my view, Navaho Dam construction cannot get off the ground in 1958 on an appropriation of $1,800,000 as requested by the Department for its fiscal 1958 budget. Thus, next year the possibility will exist, as it does today, that we will be facing another year's delay in this vital construction project.

I know that the Bureau is attempting to have work proceed on the initial units of the whole upper Colorado storage project in a way that will dovetail startup and completion. Thus, it becomes apparent that work on the simpler structures, such as Navaho Dam, may be held back because of their relatively short construction time and their relative simplicity of construction.

For example, Flaming Gorge Dam contemplates expenditure of a total of $57 million as contrasted with $36 million for Navaho Dam. Access to Flaming Gorge is much more costly and difficult than access to Navaho Dam. Work to date has progressed further on the preliminary phases of Navaho Dam than is the case at Flaming Gorge. But I am informed that the plan now calls for a contract award for Flaming Gorge ahead of the award planned for Navaho Dam, even though completion dates may be more or less proximate. Of course, a contract has been awarded for the most difficult dam of all, which is Glen Canyon. The Bureau of Reclamation is to be commended for its awareness of the relative difficulty and complexity of these units.

However, I believe that there are other factors which should be considered along with the dovetailing of construction dates. These other factors may be of such worth that the simple units could be constructed as rapidly as possible without the many stretchouts which would keep them in step with the more complicated units. The Bureau and the Congress should exercise care that a budget-convenient time schedule shall not become the dominant consideration in the appropriation of funds.

Everything possible should be done to get as many contracts awarded as possible, as quickly as possible, to assure as much progress as possible, so that the economic benefits of these units will be realized with as little delay as possible. That, in the ultimate sense, is the only true economy.

PAYMENTS INTO RECLAMATION FUND

Senator WATKINS. Mr. Chairman, could I, out of turn, read a paragraph out of my statement to the Senator from New Mexico?

Chairman HAYDEN. Yes; certainly.

Senator ANDERSON. I would be very happy to hear it.

Senator WATKINS. For the information of those who are not aware of the contributions from the States available for reclamation development, I wish to point out that the 4 upper Colorado River Basin States fiscal 1956 were credited with total payments of $24,153,322 into the reclamation fund from public land and minerals revenues. Since 1902, public lands in these 4 States produced revenues totaling $224,999,871 for the Treasury's revolving reclamation fund. This money came into the Treasury and it was set aside from the resources of those States for reclamation projects.

Senator ANDERSON. May I say to the Senator from Utah and to the members of the committee that I think this is a most important statement.

As I pointed out in the beginning we are not asking for $900 million. We want $9 million only from the Federal Treasury and all the rest of it will be taken care of by power revenue and the development that will follow.

Chairman HAYDEN. I would like to say to Senator Young, the act of 1902 setting aside the receipts from the sale of public land was suggested by a Congressman from Alabama. The receipts from public domains have always been considered the private purse of the Nation and that money, therefore, can be set aside for a particular purpose, for the development of public lands by way of reclamation, and that is the way the bill was originally passed. As a result of it, large sums of money have come into the treasury, not out of the taxpayer's pocket, but from the resources, the public resources, from the public land areas.

This has worked, and worked very successfully. It is very difficult to make people who do not know the facts realize that actually these reclamation expenditures are not at the taxpayers' expense. Another thing, they are reimburasble so that, in both ways, the American taxpayer is soved the expense of making these developments.

LAND HELD IN TRUST

Senator WATKINS. As a matter of fact, the United States holds the public land in those 17 Western States in trust for the people of those States. The people of all the other States have had their land, and there are very few public lands left in the other States, except national park and national forest acreage and land being acquired for certain building purposes. These Western States came into the Union later, and the lands are held in trust by the United States Government for the benefit of those people. So it was only proper, as money came in from oil leases, mineral leses of every kind, and sale of public land, that it should go into a fund for the development of the areas for the people of those States. The rest of the country does not own these lands any more than we own the land in the other States of the Union. They are lands reserved for our ultimate use and that is the justification for putting the money in an extra fund, and most of the people do not realize it.

When we come in and ask for reclamation appropriations, we are asking Congress to appropriate funds that came from our own areas that are already earmarked in the Treasury. At least, that reserve fund would take care of any interest that we might have been required to pay on reclamation project funds allocated to irrigation. We do not pay interest on that; we repay only the principal. But all the rest is repaid with interest.

Senator YOUNG. I was not aware of that.

We do not pay interest on that; we repay only the principal. But all the rest is repaid with interest.

Senator YOUNG. I was not aware of that.

Senator WATKINS. Most people in Congress do not know that, and I have to keep repeating it.

Chairman HAYDEN. Senator Watkins, you may proceed with your statement.

STATEMENT OF HON. ARTHUR V. WATKINS, A UNITED STATES SENATOR IN CONGRESS FROM THE STATE OF UTAH

General Statement

Senator WATKINS. Mr. Chairman and members of the subcommittee, your courtesy is permitting me to appear before you this morning to discuss a subject that has been important to me throughout my lifetime—the development of our water resources—is greatly appreciated.

I well realize that you gentlemen and your colleagues in the House are equally as interested as I in this general subject. And I further appreciate that you bear the burden of considering the appropriation of funds for resources development in relation to the pressing demands for other Federal expenditures, and I am sympathetic with you in your assignment to make the initial decision for the Senate as a whole.

Hence, I trust that you will treat this discussion in the framework in which it is intended. It is not offered as an unsolicited advice from one who, admittedly, is not as well versed as you are in the appropriations field; instead it is presented as the viewpoint of a colleague who has had considerable experience in the field of resource development and one who plans to participate in the floor discussion of this measure and thereby share with you the responsibility for a decision on this matter. I hope that my views will help sustain you in your continued support of adequate funds for water-resource development.

FUNDS FOR WATER-RESOURCE DEVELOPMENT

I wish to start out by asserting that it is my belief that support for appropriations for water-resource development is not inconsistent with the desire that most of us share for a reduction in Federal spending. It is true that the elimination of funds for water-resource development would contribute to an initial reduction in Federal spending. But what would be the cost of such so-called economy?

First of all, economic expansion and population growth in many areas of the arid and semiarid West would be greatly reduced or halted. Water is the No. 1 priority basic resource in many parts of the

West, and it is rapidly becoming a limiting factor in many humid parts of the country.

There is no alternative for water in industrial operation and municipal growth, and sound water resource development contributes to new sources of wealth and of tax income for public purposes.

Furthermore, there is a long delay, or lead time, in constructing facilities for water resource development—especially in the West, where the limit on development by State-local government and private enterprise had been reached in many areas by the first of this century when the Reclamation Act of 1902 was passed by the Congress. As we discovered in all the wars in which this country has become involved since then, we cannot bring in new water and power supplies merely by passing legislation or voting money.

DEFENSE ASPECT

Water and byproduct hydro power are essential not only for additional growth in many parts of the semiarid West, but also are essential for adequate dispersal of defense-related industry and military installations.

And the fact that the semiarid half of the country is confronted with existing and potential water shortages makes water-resource development a national problem. Shortage areas also exist today in many parts of the humid eastern half of the country; hence nationwide interest is being enhanced every year.

However, assuming that your committee recognizes a deep national interest and a need for long-range planning and development, the problem frequently comes down to a project-by-project analysis for the most effective use of limited funds available.

In consideration of such projects, I commend these points to your committee:

1. Is the project well planned? In view of the total of $12½ billion total valuation of projects now under consideration by the Appropriations Committee, all new water-resource projects must be well planned and adequately reviewed by State and Federal agencies.

2. Do the project beneficiaries participate adequately in the sharing of construction costs and annual operation and maintenance?

That is an important problem. More and more they are coming to realize there should be more participation in all types of water-resource development. Reclamation people have led the way in compensating the Federal Government in repaying the cost of construction of the projects.

NEW GRESHAM'S LAW

I believe that most members of the committees are aware of the application of Gresham's law to water-resource development, as made in the report of the Hoover Commission Task Force on Water and Power. This new Gresham law is: "Nonreimbursability drives out reimbursability."

In the piecemeal development of our water resource program, differing standards of reimbursability and cost-sharing apply to the various water resource programs of the Federal Government. Until the Congress takes action to place all programs on the same general

standards, the programs which are reimbursable tend to become nonreimbursable, and "shopping" among the construction agencies for the least expensive development—to the State-local interests—is encouraged. This situation undoubtedly will be aggravated by the passage of the omnibus flood control and navigation bill, with its far-reaching policy changes relating to future storage and low-flow regulation. The pressure against non-Federal participation in cost sharing was recognized by the House Appropriations Committee in its injunction against local flood-control projects which are neglecting operation and maintenance responsibilities—page 12, House Report 552.

In connection with this commendable committee attention to a cost-sharing problem I also wish to point out that Federal operation and maintenance costs for flood control and navigation programs are now roughly comparable with the total construction costs for the reclamation program, which meets its own operation and maintenance costs.

The total appropriated for operation and maintenance in the general civil works program in the House was $98,870,000. To this amount must be added some $14 million for maintenance of the Mississippi River program. In addition, the Corps of Engineers has advised me that annual operation and maintenance costs for projects authorized and under construction will add another $15 million to this total when these projects are completed. This means that we are now committed to an annual operation and maintenance bill for these two programs of roughly $128 million. Construction costs for the general reclamation program were placed at $113 million in the House bill, exclusive of the appropriation of $25 million for the upper Colorado River Basin fund.

OPERATION AND MAINTENANCE COSTS

Since 1902, reclamation projects have been required to meet their own operation and maintenance costs, and this expense is a first priority charge against project revenues.

It is also noteworthy that two of the country's best-known navigation projects—the Panama Canal and the St. Lawrence seaway—were established on a reimbursable basis. Tolls levied on these two waterways will not only repay capital costs, but operation and maintenance as well.

While I am aware that the Appropriations Committees are not expected to dictate policy, I am sure that the action of the House Committee in offering to reward justified cost-sharing by the beneficiaries will have a salutary effect in promoting such participation until passage of appropriate policy legislation.

Now, these general remarks are intended to reassure you that even some of us actively supporting adequate water-resource appropriations are not adverse to close scrutiny of projects and to requirements for participation in the tremendous financial commitments ahead by project beneficiaries.

COLORADO RIVER STORAGE PROJECT

On the basis of my own brief yardstick, I would like to review a project in my own area that I am supporting, and which I feel can meet

requirements for justification and adequate cost-sharing just as high as you want to put them. I am referring, of course, to the Colorado River storage project.

This project actually was under planning for a quarter of a century. Furthermore, expense of the $10 million planning program was met almost entirely by revenues to the 4 basin States from Hoover Dam power revenues, or by direct contributions by the States involved. In addition, two interstate water compacts apply to the upper basin, a factor which will save the Government and the States in the basin millions of dollars in litigation.

YEARS OF PREPARATORY WORK

Chairman HAYDEN. Senator Watkins, I would be glad to have you point out that previous work has been done on these projects which enables them to promulgate the construction of the dams. They have had years of preparatory work done on them because of the availability of part of the Boulder Dam revenues that have been used in the engineering studies.

Senator WATKINS. And we made contributions from our States to the projects, also.

Chairman HAYDEN. Yes.

Senator WATKINS. I have made some studies of the reclamation projects. This has been a difficult one to plan, and it is the first comprehensive, basinwide development we have had approved in the West. Most projects fit in piecemeal. We want this project now, and the next year they will want another project; consequently, you never see the whole picture. But here we present the whole picture, and that is why it has been so difficult for us. It is the first time it has ever been done. The whole plan has been worked out to show how each dam worked with the other one, the power use, the savings, and distribution of water, and all that sort of thing.

TOTAL DAMS

Senator YOUNG. How many dams will there be?

Senator WATKINS. Did I say 7 or 8 dams, altogether?

Mr. DEXHEIMER. There are four now, and there will undoubtedly be others of smaller magniture, smaller storage dams that will be included later.

Senator WATKINS. There will probably be around 7 or 8 major storage structures at least, or maybe more.

Mr. DEXHEIMER. Oh, yes.

The Paonia project will have storage dams, as one of the participating projects. Each one will have dams and some storage on them.

Senator WATKINS. Hence, I believe that it most assuredly meets requirements for adequate advance planning. Reports made to the House committee, to the effect that contract costs for this project are remaining amazingly close to estimates, in spite of annual price increases, indicate that the planning was sound and conservative.

COST SHARING

As to cost sharing, I believe you will be gratified to observe on page 657 of the House hearings, part I, that the nonreimbursable costs of

this $942,414,000 project amount to only $8,206,000, or less than 1 percent. This means that the water and power users in the area affected will return 99 percent of the capital costs of this great 4-State project. Furthermore, interest, at prevailing long-term rates for the Federal Government, will be paid on two-thirds of the investment allocated to municipal water and power. Interest will be paid during construction and all the capital investment allocated to irrigation will be repaid.

Now, in spite of the obviously sound nature of this project, we are not asking that this project be constructed and all other projects held up until they can meet the same high standards. Of course not. We recognize that our water resource policies have been developing over the past century, and we also recognize that all sections of the country must advance if the country is to flourish and prosper.

However, we do feel that inasmuch as we are guaranteeing almost complete repayment of this project, and meeting the costs of operation and maintenance, that we deserve all the consideration this committee can give us to keep this project moving along. If this project is expedited, we can make these savings, all of which will be greatly appreciated by residents of the four States which demand and expect little participation in the great flood-control and navigation programs:

(1) A savings in interest during construction. Many large reservoir projects are built and operated almost entirely at Federal expense. If those projects are delayed slightly, no actual loss accrues to the project beneficiaries. For us, any unavoidable delay means an increase in interest costs, which on a large project is a large item.

(2) A savings in capital construction costs. If contracting firms believe that a project will be carried along with dispatch, their bids will reflect their own decreased costs. This was well demonstrated in our experience with the Weber Basin project in Utah. Inasmuch as this project was carried along with dispatch, savings of roughly 6 percent have been made under estimates. If a similar record could be made on the Colorado project, it could mean a savings to our water and power users of roughly $57 million.

GLEN CANYON DAM PROJECT

And may I call your attention to the fact the first major contract was bid 20 percent under the estimate. That was for the Glen Canyon Dam. So, we have had some very able people estimating these costs. They are not underestimating in order to get under the fence and then expand as we go along. At least it could continue to keep costs close to estimates, a real achievement by itself in these days when costs have been advancing about 4 percent a year.

(3) Expedited construction of our large storage reservoirs will make it possible to fill them faster if we are entering into a wet cycle.

WET CYCLE

May I call attention to the fact it appears that we are entering into a wet cycle out West, and that wet cycles runs around 10 or 15 years, sometimes. If we can get those dams built soon, we can fill them much faster during this wet cycle. We cannot interfere with downstream water requirements while filling those dams. If there is only enough water to take care of the downstream requirements, then we will have

to sit and wait. As I say, it looks as though we are coming into a wet cycle, and there has been a heavy precipitation out West this year, the best we have had in many, many years. There is a big flow down the Colorado River which will replenish Lake Mead, and if that goes on, we can easily fill the dams if we have them ready.

It not only will require at least 6 years to complete construction of Glen Canyon Dam, for example, but also another 10 to 15 years will be required to fil the reservoir, and meet downstream requirements for water. Unnecessary construction delays could move us through a wet cycle during the construction period, and stretch out the time required to fill the storage dam, for most efficient operation of the storage reservoir.

SALE OF POWER AT PROFIT

(4) Unnecessary delays will defer the completion and operation of the hydropower units, which will help us produce funds to repay the heavy project cost. In our case, we do not propose to produce power and sell it at cost or below cost merely to produce power and attract industry. We are planning to sell the power from Glen Canyon at roughly 1.3 mills above cost, and utilize the additional revenues to develop water supply projects.

Now, this is a point that is very important. They talk about cheap power in the Northwest, and it would not be so cheap if they added on something to help irrigation. They do not do so. It is a long story and I could talk for hours on this one thing alone. Here we are adding 1.3 mills—if I have got my figures right—onto the actual cost of power, and we are willing to pay that amount. The people who buy the water will be the people who buy the power, and they will be willing to pay for it.

As a matter of fact, you can put it all in one bill and say water and power. It is not a case of power users subsidizing the water users. First of all, we have got to have water, and if we had all the power in the world it would not do any good without the water. We could hardly pump water from the Pacific Ocean if they found a way to take the salt out of it.

Meanwhile, if we do not store and utilize this water resource, the water produced on our watersheds must be allowed to continue to flow downstream and presumably waste into the Pacific Ocean without benefiting us. That is neither justice nor good economics.

The savings that I am talking about here are direct savings to the residents of the four upper basin States—Colorado, New Mexico, Utah, and Wyoming. That is because we repay the investment and meet the operation and maintenance costs.

It is an indirect savings, also, for the Federal Government, inasmuch as any money saved will not have to be expended, and the earlier completion of the revenue-producing facilities will contribute to an earlier reimbursement of the money advanced by the Government.

ULTIMATE QUESTION FACING COMMITTEE

The ultimate question to be faced by this committee is, of course: How much money should be advanced to this project this year?

At this point, I would like to interject this statement. During last summer—it was about the time the President pushed the button which set off the first explosion in the first construction on the Glen Canyon

Dam—and I sent him a telegram. I looked over this matter and checked it from every point I could. I am not an expert in any particular field, but I have had a lot to do with reclamation for about 24 years, and a little engineering should have brushed off on me during that time. I estimated that we could spend $37 million wisely and economically, and I wired the President to that effect, and asked him if he could not make a commitment to go along on that. I received a wire from him in which he said he would support all the money that could be used wisely and economically, and that satisfies me. I think we can qualify under those terms. And I think the President was absolutely sound in what he said.

The answer to this question should be provided by the witnesses who appear before you, and your conclusions as to the overall availability of funds.

From my own observations and conversations I have had with officials in the four upper basin States and with the technical personnel at the project sites, I have concluded that my estimate last fall of the reasonable justification of an appropriation of $37 million remains sound today.

Such an appropriation not only will advance construction on the main-stem storage units at Glen Canyon, Flaming Gorge, and Navaho Dam sites, but it also will provide funds for planning and initiating construction work on the participating projects which will actually develop water for the area. It is my understanding that all the required planning reports for the Vernal and Paonia units are now in Washington.

As you know, the Vernal unit is in northern Utah, and the Paonia unit is over in Colorado. As I understand it, the upper Colorado River Commission met some time ago—that commission is made up of the representatives of the four upper-basin States—and they reached an agreement that they would support participating projects in all the States, and they would urge that we try to approve them as rapidly as they became ready for construction. It so happens that Vernal and Paonia are the only two ready for construction at the moment. I hope the chairman will ask Mr. Dexheimer about these projects. My information is they are ready to go, and there should be an allocation made, because it takes a long time to get them completed.

As Congressman Dixon pointed out, this area in northern Utah, for instance, is 122 miles from a railroad. I used to understand, when I lived there, it was 150 miles from a railroad.

We do have many livestock, sheep, cattle, and some poultry, in that area, and it has been necessary for many years to ship in grain. We have never had any exports to get into the national market, or even into the State market. We are usually on the deficit side, and have to ship grain in, and it is a terrific handicap.

This means that construction on these two units could well begin in fiscal 1958. I strongly urge that you question the departmental witnesses on the prospects of initiating work on these two project units this coming year.

FUNDS FOR PAONIA PROJECT

I will enter later, in my prepared statement, a suggestion that a million dollars each for these projects should be allocated, earmarked

out of the money that is appropriated for this overall Colorado storage. I am just as interested in getting Colorado's Paonia project under construction as I am our own, because they all ought to go forward. It is a common enterprise among the States, and I think that is the only attitude any of us should take—that they all should go forward.

Other funds in the more adequate appropriation will advance planning work on other participating projects and cover the cost of planning for transmission of system power.

CONTRIBUTIONS TO RECLAMATION FUND

I am sure that this committee is well aware that the four States involved in this project are contributing into the reclamation fund of the Treasury many millions of dollars annually. These funds have been channeled into an earmarked fund originally established in 1902 as a revolving fund to support reclamation development. And it is most appropriate that revenues from public lands and nonrenewable resources in the areas affected should be utilized to develop renewable resources in those areas.

For the information of those who are not aware of the contributions from these States available for reclamation development, I wish to point out that the four upper Colorado River Basin States in fiscal 1956 were credited with total payments of $24,153,322 into the reclamation fund from public land and mineral revenues. Since 1902, public lands in these four States produced revenues totaling $224,999,871 for the Treasury's revolving reclamation fund.

Now, that is the one I read before, but I wanted to read it once again.

Senator YOUNG. Are these funds set aside?

Senator WATKINS. They go into the Treasury, and as the Senator knows, all the funds, no matter where they come from go into one pot and the bookkeepers or accountants keep track of them. But they are in the general fund, and it really belongs to these people, money held in trust for them, the same as contributions made by Government employees and others under social security.

This fact alone justifies special consideration for these States in water-resource development, especially when it is considered that the Colorado River storage project is 99 percent reimbursable.

At this time, I shall not go into any detailed discussion of other Utah projects on the appropriations schedule. I believe this committee is well aware of the eminent economic justification of the Weber project, which has moved along most expeditiously since it was authorized. Again I wish to commend this committee for its part in providing ample funds for this project, a factor which I believe is primarily responsible for the placing of so many Weber project contracts at less than estimates, an average of about 6 percent under estimated costs.

The House bill also includes $400,000 to complete construction of a revenue-producing powerplant at the Provo River project, an item which I believe will not be challenged by anyone.

FLOOD CONTROL WORK WEST OF SALT LAKE CITY

My State has one lone flood-control project on the civil works program, a $300,000 appropriation for flood control work west of

Salt Lake City. This is a program that has been deferred by the local interests for several years, but they are now back of it and the program is needed now more than ever because of the great buildup of industrial and municipal areas in that section of the Salt Lake Valley which would be affected by the flooding of the Jordan River.

I have taken more time than I should, but I want to say this: when we get into the discussion on the measure, there may be moves to cut down the Colorado River project appropriation. On the other hand, I think the committee would be fully justified, as it was last year, in raising what the House approved, and even what the Budget Bureau asked for. Last year, the House approved $6 million, and the budget asked for around $8 million, but this committee recommended $13 million, and the Senate went along, and the House accepted it without a fight, as I understand it, because you can justify the expenditure which means actually a saving in dollars to the Government to get this thing moving.

I want to thank you again for allowing me this time.

Chairman HAYDEN. Thank you very much for appearing.

Senator Allott.

STATEMENT OF HON. GORDON ALLOTT, A UNITED STATES SENATOR FROM THE STATE OF COLORADO

PAONIA PROJECT IN COLORADO

Senator ALLOTT. I thank you, Mr. Chairman, and I want to first of all compliment the senior Senator from Utah for a very fine statement.

While I have not had the same facts available to me that he has had with respect to the overall matter of the Colorado storage project, I want to support him in his request for the appropriation.

I deeply appreciate the opportunity to appear here this morning and explain the critical need for immediate construction of the Paonia project in Colorado.

I have a short statement here, but I feel that the picture should be brought before this committee.

The Paonia project is not a new project. It started, in fact, 20 or more years ago, and the people of Colorado have been working for the construction of the Paonia Dam during that time.

In 1936, the Bureau of Reclamation opened an office in Paonia, Colo. A substantial and comprehensive report was made by the Bureau in April of 1940. However, World War II delayed further progress on the project at that time.

HISTORY OF PROJECT

To refresh your recollection about the Paonia project, the Paonia area is a country which is famous for its apples and peaches. It is about 40 miles east southeast of Grand Junction, Colo., over on our western slope.

On June 12, 1947, a report was presented to the Senate by our beloved and distinguished Senator Millikin, during the 80th Congress, and the report was the basis for the authorization of the Paonia project and the sum of $3,030,000 was appropriated in 1947.

A repayment contract was executed between the North Fork Water Conservation District and the United States, which was approved by the vote of the people of that district on June 5, 1948.

The Bureau of Reclamation invited bids on the plans and specifications on the dam to be constructed on the Spring Creek site of Muddy Creek which is a tributary of the Colorado River by way of the Gunnison River. Bids were opened on August 3, 1948, and the lowest bid for construction of the dam was $3,004,000, or $17,000 in excess of the overall appropriation for construction of the project. Inflation had done its work, and the Bureau had no choice but to hold off construction.

However, under the appropriation an enlargement and extension of the Fire Mountain Canal phase of the project was substantially completed. At that time it was thought that the upper Colorado River storage project would be commenced within a year or two, and that the balance of the work could be completed as a participating project. As the members of this committee know, the upper Colorado River project was not authorized until the spring of 1956.

The completion of this long-awaited project is many years overdue. I repeat, it is not a new start. It has long had a high priority with the Bureau of Reclamation, and I am sure Commissioner Dexheimer will attest to that.

COMMUNICATION

It has the No. 1 priority for completion of the Colorado Water Conservation Board, and to complete the record on that point I should like to introduce a letter from Mr. Ivan C. Crawford, director of the Colorado Water Conservation Board.

Chairman HAYDEN. That may be done.

(The letter referred to follows:)

COLORADO WATER CONSERVATION BOARD,
Denver, Colo., January 8, 1957.

Hon. GORDON ALLOTT,
Senate Office Building, Washington, D. C.

DEAR SENATOR ALLOTT: I am attaching to this note a copy of a letter which I have today addressed to Governor McNichols, relative to appropriations for the upper Colorado River storage project.

The Paonia, a participating project, has the No. 1 priority in Colorado. In conformity with the letter of the President of March 19, 1954, the Agricultural Department is now making a survey of the agricultural economics of this project; the survey should be finished within a month.

There is no reason why construction should not start early this summer in case funds are available. I am sure you are aware of the situation. However, yesterday's press report announcing only $20 million for the whole upper Colorado River storage project leads me to believe that Paonia might possibly be omitted.

Sincerely yours,

IVAN C. CRAWFORD, *Director.*

SUPPORT OF STATE OFFICIALS

Senator ALLOTT. This project has the support of the officials of the State of Colorado. With respect to that, I should like to introduce a letter from Governor McNichols of Colorado.

Chairman HAYDEN. The letter will be included.

(The letter referred to follows:)

THE STATE OF COLORADO EXECUTIVE CHAMBERS,
Denver, February 15, 1957.

Hon. GORDON ALLOTT,
United States Senator, Senate Office Building, Washington, D. C.

DEAR GORDON: This will acknowledge with my appreciation your letter of February 13 and your promise to do everything possible to see that funds are provided for initiating construction of the Paonia participating project in fiscal 1958.

I appreciate your interest in this matter and urge that this will be done as soon as possible.

With kindest regards and every good wish, I am
Sincerely,

STEVE.

PROJECT ESSENTIAL TO AREA ECONOMY

Mr. ALLOTT. I would like to introduce a letter from Mr. Dorsey Hawkins of Paonia and another from Mr. Charles R. Neill, executive vice president of the North Fork Water Conservancy District, which was addressed to the chairman of this committee.

Mr. Neill's letter will explain, as will that of Mr. Hawkins, why the completion of the Paonia project is essential to the healthy economy in the area and also the tremendous need for flood control of this basin, as extensive damage is now being done to the property in the area by the uncontrolled flow of Muddy Creek and the North Fork of the Gunnison River.

Chairman HAYDEN. The letters will be included as requested.

(The letters referred to follow:)

PAONIA, COLO., *June 7, 1957.*

Hon. GORDON ALLOTT,
Senate Office Building, Washington, D. C.

DEAR SENATOR ALLOTT: You are, no doubt, receiving many letters from various parts of the country concerning flooding and damage done by the heavy runoff of streams this year, and requesting that more stringent efforts be made to obtain dams along the streams.

As you know, for more than 20 years we have been attempting to obtain the Paonia project dam. If this dam had been constructed when it should have been, 10 years ago, it would have saved the individuals and taxpayers of Delta County many thousands of dollars; and I sometimes wonder if a sufficient amount of money is charged to the project for flood control.

In most areas where people suffer as a result of high water, the rivers merely overflow and flood the land. Some houses may be damaged by water and mud that is caused by the rise of high water and the farmland may be lost from production for a year. But in this county our river runs with such a great velocity that the damage it causes is by washing away farmland completely and it is lost to production forever. Some of this land is very valuable.

Right now many individuals in the county are fighting night and day to prevent more valuable orchard land from being washed away. Much of it has already been washed away this year. This is extremely valuable land. This land will produce a gross income from $500 to $1,000 per acre. When a few acres are completely lost, the income loss over a period of years is very great.

During the time I can remember there have been a great many—perhaps 200 or 300—valuable acres destroyed by the heavy spring runoff in the North Fork of the Gunnison River.

For these reasons, I wonder if sufficient amount has been charged to flood control in the Paonia project. Thousands of dollars are spent every year in trying to keep the river in its course, but it runs with such great velocity that when it is turned from one farmer's ranch, it runs across and damages the land of a neighbor across the river.

There could be only two ways to solve this. One would be by spending a tremendous sum of money for concrete retaining walls along the river; the other is the building of dams to hold back water during flood stage.

I wish to again urge and know that you will do your utmost in trying to get an appropriation so that this project can be offered for bids this coming fiscal year.

Yours sincerely,

DORSEY C. HAWKINS.

PAONIA PROJECT

NORTH FORK WATER CONSERVANCY DISTRICT,
Hotchkiss, Colo., March 22, 1957.

Hon. CARL HAYDEN,
Chairman, Appropriations Committee,
United States Senate, Washington, D. C.

MY DEAR SENATOR HAYDEN: The purpose of this letter is to solicit your interest in securing some degree of appropriation for construction purposes on the Paonia project for fiscal 1958.

The water users and business people of the area of this conservancy district feel that they are the victims of a squeeze play even if not being directly discriminated against.

The reasons for this feeling is as follows, briefly stated:

The Bureau of Reclamation opened an office in Paonia, Colo., in April 1936. A substantial and comprehensive report was made by the Bureau in April 1940 (Project Investigations Report No. 19A).

Then War II for some delay. However, immediately following the war was some years of avoidable delay which I will not here go into.

Subsequent to the April 1940 report by the Bureau, other reports were made, Senate Document No. 61, 80th Congress, 1st session, April 21, 1947, being the outcome of reports and being the basis upon which the Congress authorized the Paonia project.

This 1947 authorization was on the basis of an estimated cost of $3,030,000.

In 1948 the Congress appropriated the estimated cost, $3,030,000.

In June 1948, the electorate of this conservancy district authorized the directors of this conservancy district to sign a repayment contract with the Department of the Interior for the sum of $2,320,000 over a period of 68 years. This contract was signed shortly after its being authorized.

The Bureau of Reclamation then published the information on plans and specifications for the construction of a dam (Spring Creek Dam), and invited bids on this phase of the three-phase project.

On August 3, 1948, bids were opened. The low bid was for $3,047,000, being $17,000 in excess of the overall appropriation.

On August 4, 1948, Director Larson, fourth region, Bureau of Reclamation, met with the board of directors of this district and other water-using associations, stating that this low bid virtually tied the hands of the Bureau until more money was appropriated or until the upper Colorado River compact was authorized which would be the base for the upper Colorado River storage project and participating projects.

On August 4 it was known that the upper Colorado River compact was to all intents and purposes a reality. This compact was verified by the States of the basin on October 11, 1948, subsequently ratified by the Congress in April 1949.

On August 4, it was assumed that it would be but a year or two until the storage project would also be an accomplished fact.

Thus, on that date it was concluded by all interested parties that it would be desirable for the Paonia project to come in as a participating project, that the cost of the project in excess of the $3,030,000 appropriation be paid out of the power earnings from the storage project. This rather than to go back to Congress asking for more direct appropriation to complete the project.

The long delay in the authorization of the storage project and participating projects was long delayed. The reasons for this delay will not be gone into here and now.

The long-awaited storage project authorization became a reality on April 11, 1956 (20 years from the date of the opening of the Paonia project office).

On this date, April 11, 1956, apparently everyone thought the Paonia project was in the bag, that our worries were at last over.

The region 4, Bureau of Reclamation officials assured us that come July 1947 they would be ready to go on the construction of the dam.

Then in January 1947 the shocking news that the Budget Bureau did not recommend any money for construction on the Paonia project.

In our search for reasons for not being included in the budget for fiscal 1958, we get what we think are baseless excuses. One is that the Budget Bureau states that the agricultural report required of participating projects was not in the Bureau.

This in our opinion is a reason without foundation, by reason of the facts that the Paonia project was authorized in 1947, funds were appropriated in 1948, a repayment contract was signed in 1948, bids were called for and subsequently rejected in 1948.

So we think we are caught in a squeeze between Agriculture and Interior in the Presidential letter of March 19, 1954.

Or that we are just being directly discriminated against.

Either of the two situation being definitely without justification.

Billions for foreign aid with not even half a million for this project.

It is a safe assertion that a good many thousands of dollars would have been paid in this area in Federal income tax for 1956 had there been sufficient water to have finished in marketable condition a large portion of the crops under this project.

Sympathy for foreign aid in this area is rapidly being dissipated when not even funds for a start on the Paonia project is provided.

Anything you can do for this project in the way of funds with the beginning of the new fiscal year will be ever so greatly appreciated.

Sincerely,

CHARLES R. NEILL,
Executive Vice President.

INVESTIGATION AND PLANNING COMPLETED

Senator ALLOTT. Mr. Chairman, may I earnestly request that this committee approve at least $500,000 for initiating the final phase of the desperately needed Paonia project.

Senator YOUNG. May I ask one question?

Chairman HAYDEN. Yes.

Senator YOUNG. Mr. Dexheimer, has the investigation and planning been completed on the dam, so that it would be ready for construction?

Mr. DEXHEIMER. Yes.

We have the reports available in our office now, and that completes not only our work, but the cooperative work with the Department of Agriculture on the survey that was directed by the President, a survey in conjunction with the Department of Agriculture on the project. So, it is ready now for for construction.

NO BUDGET ESTIMATE

Senator YOUNG. Is there a budget estimate for the construction?

Mr. DEXHEIMER. No, sir.

Senator YOUNG. Did the Bureau of Reclamation ask for one?

Mr. DEXHEIMER. Yes, sir.

Senator ALLOTT. Mr. Chairman, I wonder if it would be out of order, if I addressed some questions to Mr. Dexheimer, as I must leave shortly, due to the fact I have some witnesses down here for another committee. If I could, I certainly would appreciate it.

Chairman HAYDEN. Certainly.

Senator ALLOTT. At the time you requested those funds, the reports were not available; is that correct?

REASON FOR BEING OMITTED FROM BUDGET

Mr. DEXHEIMER. That is correct. They were not available, and the Budget Bureau took the stand until those reports were available we would not be ready to ask for construction money.

Senator ALLOTT. You did not request money then?

Mr. DEXHEIMER. Senator Allott, I think that is right. I did not then because the reports were not final.

We made an initial request, anticipating the reports would be ready so we could start, but it is not included in the budget.

Senator ALLOTT. I wonder if we could have for the record information as to the status of the plan report now.

Mr. DEXHEIMER. The plan report is completed, and we expect within the next few days to send it to the Bureau of the Budget and subsequently to Congress.

Senator ALLOTT. If Congress appropriated $500,000 for this project, could it be utilized in a good businesslike manner in the construction of this project during this coming year?

Mr. DEXHEIMER. Yes, it could. We could advertise for bids for the start of construction, so that the earnings under that contract would be consistent with whatever funds we might have available for the fiscal year.

Senator ALLOTT. The project itself, as I understand it, has a very good ratio benefit. Is that correct?

Mr. DEXHEIMER. Mr. Tomlinson has the figures on that.

Mr. TOMLINSON. Yes, the ratio of benefits to cost are very good on that.

Senator ALLOTT. I think that brings out the situation pretty well, Mr. Chairman.

FIRE MOUNTAIN CANAL

I do want to call the attention of the committee to the fact that we have already invested in the building of the Fire Mountain Canal. We do not have the dam, so while the Fire Mountain Canal is being used in the same general way that it was used before, the real construction of the canal is of no use until we complete the dam.

I cannot think of an analogy to this, but it is like buying a can of gasoline before you get a car. We are in that situation in Colorado with regard to Paonia.

I do hope the committee will very carefully consider this request.

May I ask one further question of Mr. Dexheimer?

Chairman HAYDEN. Yes.

STATUS OF REPAYMENT CONTRACT

Senator ALLOTT. What is the status of the repayment contract which was previously executed?

Mr. DEXHEIMER. Mr. Dominy of my staff has the details on that, Senator Allott.

Mr. DOMINY. The upper Colorado River bill, the authorization on the Paonia project specifically gives us the authority to use as much as 68 years repayment period, which was the same period that was authorized in the original Paonia project authorization. We were directed to compute the repayability of the Paonia project, and we

have found that the economy studies that we made earlier are still valid, and so that existing contract is still valid, and we have only a few minor adjustments to make which can be made by supplementary agreements. We will not even have to have another vote of the district. It is a valid existing obligation, so we are ready to go as far as repayment contracts are concerned.

Senator ALLOTT. I think that completes my questions, Mr. Chairman.

I certainly appreciate your allowing me to speak, out of order, in order to present this matter.

Chairman HAYDEN. Thank you.

SCHEDULE FOR COLORADO PROJECT

Senator YOUNG. What is the schedule for the completion of the Colorado project? I know it will cost you $543 million. How many years will it take?

Mr. DEXHEIMER. Upward of 20 years, probably, Senator Young. It depends on so many things.

For example, when we start some of these projects; what appropriations are available; and whether repayment contracts are entered into. But the authorized project that we have now included in the $923 million estimates, we anticipate it will take 15 to 20 years.

Senator YOUNG. Projects like these are not really as big as they appear to be, when you spread them out over a long period of years.

Mr. DEXHEIMER. Well, it depends again on how far they are spread out: When you start the participating projects and how long it may take to complete them. I would expect long before we complete the presently authorized one, there may be others that would be ready for authorization. So this may continue for a good many years.

The authorized work will only use less than half of the water available to the upper basin, so we will still be 2 or 3 million acre-feet, that is, we will have that available under the compact for future development.

LAND ACREAGE INVOLVED

Senator YOUNG. When the project is completed, approximately how many additional acres of land will be involved?

Mr. DEXHEIMER. There are 325,000 acres of new land, and a couple of hundred thousand of supplemental land, a figure of something in that order.

There is in addition an allocation of about $45 million of this original authorization for municipal and industrial water supply.

Senator ALLOTT. Without prejudice to any other particular project, do you know of any other project—I will address this to either one of you—that in light of the facts, that is deserving of earlier consideration than the Paonia project?

Mr. DEXHEIMER. No, sir; that has been repeatedly delayed, as you pointed out, and water is very short over there, and it is an area that grows the type of crops that we need in our diet, and they need water to sustain their present economy, and to help them in that general area.

Senator ALLOTT. This is not a wheat producing country, is it?

Mr. DEXHEIMER. No, sir.

Chairman HAYDEN. Thank you.

STATEMENT OF SENATOR JOHN A. CARROLL

I have been advised Senator Carroll has been delayed, and his statement will be included in the record.

(The statement referred to follows:)

On April 29 of this year, the Assistant Secretary of the Interior, Fred G. Aandahl, announced the award of the construction contract on Glen Canyon Dam in the upper Colorado project.

Mr. Aandahl revealed that the cost of the dam will be $27.6 million below the Interior Department's estimate of the construction cost.

I am aware, of course, that this should not signal a rush to create programs to use up another $27 million.

This is a valuable economy and should be hailed as such.

However, the enormity of the saving at this time does prompt me to call to the attention of the committee a sister project of Glen Canyon Dam that has struggled along since 1939, starving for construction funds.

I am referring to the Paonia project in Colorado.

Paonia is part of the upper Colorado River project.

It was first authorized by Congress in 1939, long before its parent Colorado River program was on the drawing boards.

Paonia was reauthorized again in 1948, and then again last year in the Upper Colorado River Act.

Paonia is an 18-year-old stepchild of western reclamation.

It has been "studied" to death and again this year $30,000 is recommended in the budget for "further studies."

The people of western Colorado were promised by responsible Government officials that funds would be forthcoming in fiscal 1958 so that construction could begin this summer.

For the 18th year they were sorely disappointed when construction funds were not included in the budget.

In a letter to me from the North Fork Water Conservancy District, I was told the farmers in the Paonia Valley are literally "heartbroken."

The conservancy district is paying back the Government for construction of the Fire Mountain Canal which is a portion of the Paonia project built several years ago.

The farmers are paying for the canal even though the canal carries no water at the critical period of late summer.

The canal carries no water because the Paonia storage dam upstream on Muddy Creek has not been constructed.

The farmers in the Paonia Valley are small family farmers.

They suffer from late season water shortage.

Usually the water available in the last month makes or loses a crop.

These farm families have been more than patient these 18 years.

I come before you today to appeal to you to let their long-cherished desires be finally realized.

The total cost of the Paonia storage dam will be $5,700,000, with another $100,000 needed for subsidiary features.

However, what I am asking today is that you include in the 1958 fiscal appropriations only $500,000 for the Paonia project in the upper Colorado River basin fund.

This, I am told, will be sufficient the first year to get the project underway.

We know the project is ready for construction because the Bureau of Reclamation, in its Advance Construction Bulletin for May, called for bids on the construction of the Paonia Dam.

That call for bids has now been "deferred." However, plans are available and ready.

Construction awaits only your action in appropriating the initial funds of $500,000.

I wish also at this time to endorse the entire Upper Colorado River Basin fund budget request of $25,142,000, in addition to the $500,000 needed for Paonia construction.

I especially call to the committee's attention that out of the entire $25,142,000 under consideration for the upper Colorado River Basin fund not 1 cent is scheduled for construction work on a project within the State of Colorado. That is why I feel obligated to call attention to the construction needs of Paonia. However, I am happy to see that 13 Colorado projects are scheduled to receive

upper Colorado Basin funds for "advance planning" and "general investigation."

I endorse the appropriations scheduled for the below named projects and I extend to the members of this committee the gratitude of the people of western Colorado for the fair and generous consideration given to these vital irrigation and power projects which mean so much to the development of a decent standard of living and a happy way of life in the West.

Colorado projects

Advance planning:	
1. Curecanti unit	$46,878
2. Silt project	40,000
3. Smith Fork project	63,394
4. Pine River extension	105,601
5. Florida project	74,109
6. Paonia project	30,067
General investigation:	
1. Animas-La Plata	33,200
2. Dolores	110,000
3. West Divide	142,000
4. Bostwick Park	56,000
5. Fruitland Mesa	33,000
6. Savory-Pot Hook	4,689
7. Fruitgrowers Dam project	4,778

Upper Colorado River Basin Fund

COLORADO RIVER STORAGE PROJECT

Chairman Hayden. The House committee recommended the allowance of the budget estimate of $25,142,000 for the Colorado River storage project.

The summary justifications will be included in the record.

(The justifications referred to follow:)

Location.—In the upper Colorado River Basin in the States of Arizona, Colorado, New Mexico, Utah, and Wyoming.

Authorization.—By act of April 11, 1956 (70 Stat. 105).

Description.—The Colorado River storage project and participating projects constitute a single comprehensive basinwide multipurpose project that will develop part of the presently unused water resources of the upper Colorado River Basin. The overall plan consists of two closely integrated activities. These are the storage units and the participating projects. The storage units have as their primary objective the regulation of the flows of the widely fluctuating Colorado River and its major tributaries by storing water in holdover reservoirs during good water years for use during the lean years. In addition, these units will produce hydroelectric power from which revenues can be derived to aid in paying for the costs of irrigation projects which are beyond the ability of water users to repay. The participating projects are for irrigation and municipal water development. These projects use the water conserved by the storage units. The present authorization for the Colorado River storage project includes 4 storage units and 11 participating projects.

Summarized financial data

Estimated total obligations	$938,727,000
Total obligations to June 30, 1956	[1] 1,982,261
Total obligations, fiscal year 1957	[2] 14,100,000
Total obligations, fiscal year 1958	[3] 25,682,000
Balance to complete	896,962,739

[1] Paonia project construction costs.
[2] Includes $500,000 contribution from State of Arizona and $600,000 allocation from Bureau of Public Roads.
[3] Includes $540,000 contribution from State of Arizona.

On a cost basis the fiscal year 1958 program will total $22,127,037. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of cost to obligations.

Change in total project cost and obligation

	Cost	Obligations
1957 congressional justification	$916,589,492	$915,065,000
1958 congressional justification	942,414,000	938,727,000
Increase	25,824,508	23,662,000

The increase in total project cost is principally due to refinement of field data, additions of civil service retirement contribution and addition of costs from the Colorado River development fund.

Total estimated project cost and allocation

Total estimated project cost to be allocated	$942,414,000
Allocation of estimated total project costs:	
Reimbursable:	
Irrigation	258,778,000
Municipal and industrial water	45,500,000
Power	624,430,000
Subtotal	928,708,000
Ultimate phase allocation	5,500,000
Nonreimbursable:	
Recreation	3,283,000
Forest resources development	48,000
Flood control	4,522,000
Fish and wildlife	353,000
Subtotal	8,206,000
Total	942,414,000

Repayment of reimbursable costs

Irrigation system by:	
Water users	$35,046,000
Participating project power	35,852,000
Upper Colorado River Basin fund	187,880,000
Subtotal	258,778,000
Municipal and industrial water by water users	45,500,000
Power systems by:	
Participating project power revenues	46,699,000
Upper Colorado River Basin fund	577,731,000
Subtotal	624,430,000
Total	928,708,000

Repayment costs per acre

Federal investment per acre:	
To be repaid from water users	$96.40
To be repaid from power revenues	616.60
Total	713.00

Repayment contracts: Cost of the project will be repaid from irrigation water users, municipal and industrial water users, power revenues, and ad valorem tax revenue collected by conservancy districts.

PHYSICAL DATA

The Colorado River storage project and participating projects as now authorized consist of the following storage units and participating projects and transmission division:

	Storage capacity	Installed power capacity (kilowatts)	Acreage to be developed	
			Full supply	Supplemental supply
Construction, fiscal year 1957:				
Storage units:				
Glen Canyon	28,000,000	900,000		
Flaming Gorge	4,360,000	100,000		
Navajo	1,450,000			
Participating projects:				
Central Utah (initial phase)	[1] 1,663,500	61,000	28,540	138,210
Hammond			3,670	
Paonia	18,000		1,160	4,380
Seedskadee			60,720	
Transmission division				
Advance planning, fiscal year 1957:				
Storage units: Curecanti	1,039,000	152,000		
Participating projects:				
Emergency County	57,000		3,630	20,450
Florida	23,300		6,300	12,650
LaBarge			7,970	
Lyman	43,000			40,600
Pine River extension			15,150	
Silt	10,000		1,900	5,400
Smith Fork	14,000		2,270	8,160
Total	36,677,800	1,213,000	131,310	229,850

[1] Includes only those reservoirs of over 36,000 acre-feet capacity.

Status.—As of June 30, 1957, construction work will be underway on three units of the Colorado River storage project. On Glen Canyon unit it is expected that work on the Bitter Springs access road will be about 75 percent complete and that the Waterholes Bridge will be completed. The right diversion tunnel and powerplant access road will be approximately 40 percent complete and work will be started on the Glen Canyon Bridge. The prime contractor will have work underway on the left diversion tunnel, spillway tunnels, cofferdams and on the abutments for the dam. Work will be in progress on both the permanent townsite and the temporary camp.

On Flaming Gorge unit work will be in progress on the access road, diversion tunnel, temporary camp, permanent townsite and the designs and specifications for the dam.

Work underway on the Navajo unit will consist mainly of access road and camp construction and the preparation of designs and specifications for the dam.

Definite plan reports will be in progress on the Vernal unit of central Utah and on Seedskadee and Paonia projects.

WORK PROPOSED, FISCAL YEAR 1958

Colorado River storage project, construction, cost program

Flaming Gorge unit, Utah, $3,700,000.—This program includes the completion of the access road and diversion tunnel and the award of the prime contract on the dam and powerplant. Funds are also required for continuing the work on the permanent townsite and temporary camp. In addition, location surveys will be performed and a contract awarded for a construction powerline.

Glen Canyon unit, Arizona, $15,602,000.—These funds are required for completion of access roads, diversion tunnels, cofferdams, powerplant service road and the Glen Canyon Bridge. The river will be diverted after completion of the left diversion tunnel and excavation for the dam and powerplant will be continued. The balance of the funds requested will be for continuation of work on the permanent townsite and temporary camp.

Navajo unit, New Mexico, $1,,530,000.—These funds are requested for completion of the access road and Government camp and for the preparation of designs and specifications and the award of a contract on the dam.

Transmission division, $100,000.—These funds would be used for rate studies, market studies, network-analyses studies, aerial surveys for the locations and other preconstruction activities.

Advance planning, cost program, $1,195,037

The planning program provides for the collection of field data, including land classification, foundation exploration, topographic surveys, aerial mapping, and the performance of engineering and economic studies which are necessary preliminary activities to the preparation of detailed plans. The funds requested will permit completion of definite plan reports on the Florida, Hammond, Pine River extension, Seedskadee, and Smith Fork projects and the Curecanti storage unit, and continuation of report preparation on Emery County, LaBarge, Lyman, and Silt projects. Also includes funds for quality of water studies required by Public Law 485. Repayment contracts where required will be obtained in connection with the projects scheduling construction starts early in the following year.

Total cost program	$22,127,037

Other expenditures and credits, $3,654,963.—Represents expenditures in fiscal year 1958 for temporary housing, service facilities, and stores that will be distributed to permanent project features in future years.

Undelivered orders, —$100,000.—Represents obligations incurred for current contracts which will be paid in the following year.

Total cost adjustments	$3,554,963
Total obligation program	25,682,000

FLAMING GORGE UNIT

Chairman HAYDEN. The budget estimate includes $4,800,000 for the Flaming Gorge unit.

The justifications will be included in the record.

(The information referred to follows:)

Location.—On the Green River in northern Utah, 1 mile below the mouth of Cart Creek and about 6 miles below the Utah-Wyoming boundary.

Authorization.—Public Law 485, 84th Congress, 2d session, approved by the President, April 11, 1956.

Description.—The Flaming Gorge unit of the Colorado River storage project will help to provide the long-time regulatory storage needed to permit States of the upper division to meet their flow obligation at Lees Ferry and still utilize their apportioned water. It will also permit production of a portion of the electrical energy needed in the upper basin. Facilities of the unit include Flaming Gorge Dam, Reservoir, powerplant, and switchyard. The reservoir will have a capacity of 4,360,000 acre-feet and the powerplant will have an installed capacity of 100,000 kilowatts.

Benefit-cost ratio: 1.4 to 1.

Summarized financial data

Estimated total obligations	$57,506,000
Total obligations to June 30, 1956	(1)
Total obligations, fiscal year 1957	1,300,000
Total obligations, fiscal year 1958	4,800,000
Balance to complete	51,406,000

[1] Financed with general investigation funds.

On a cost basis the fiscal 1958 program will total $3,700,000. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	65,014,000	65,000,000
1958 congressional justification	57,650,000	57,506,000
Decrease	7,364,000	7,494,000

The total estimated cost of the Flaming Gorge unit has been decreased from $65,014,000 to $57,650,000. The change is due in part to transferring the transmission system to the transmission division of Colorado River storage project and to an increase of $466,000 for the civil-service retirement fund.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$5,988,000
Power	51,662,000
Subtotal	57,650,000
Nonreimbursable: None	

Repayment of reimbursable costs

By power revenues	$57,650,000
Total	57,650,000

Repayment contracts.—Entire costs will be repaid from power revenues. It is not anticipated that any power-sales contracts will be negotiated in fiscal year 1958 and none has been executed to date.

Physical data

Feature	Type	Capacity	Height	Length
Flaming Gorge Dam	Concrete arch	4,360,000 acre feet	495	1,150
Flaming Gorge powerplant		100,000 kilowatts		

Acres to be served.—None.

Status.—As of June 30, 1957, work will be underway on the access road, temporary bridge, diversion tunnel, and Government camp. Preconstruction operations will be active in preparation for awarding the prime contract in fiscal year 1958.

WORK PROPOSED, FISCAL YEAR 1958

Flaming Gorge Dam and Reservoir, $2,783,000.—This program provided for completion of the access road, temporary bridge, diversion tunnel, and start of work on the prime contract.

Flaming Gorge powerplant, $200,000.—The prime contract will be awarded simultaneously with that on the dam. This amount is chiefly for preparation of designs and specifications.

General property, $610,000.—This provides for continuation of work on the administration building, warehouse, and permanent housing.

Contribution to civil service retirement fund, $107,000.—Initial year contribution to civil service retirement fund.

Other expenditures and credits, $1,100,000.—Consists of expenditures for temporary construction camp, housing, service facilities, utilities, and stores which will be charged to permanent project features in subsequent years.

TEMPORARY ACCESS ROADS

Chairman HAYDEN. For the current fiscal year $1,300,000 was made available for the Flaming Gorge unit. What has been done with these funds?

Mr. DEXHEIMER. On the flaming Gorge unit, there was a temporary access road which has taken a good part of it. There have been 2 or 3 different contracts let on that.

Recently we have let an additional contract for $2,672,000 for streets and utilities, and some housing for Government employees at the site, which is 60 miles from the nearest railroad or town of any size, and the funds will be completely expended by June 30 on these works.

AWARD OF CONTRACTS

Chairman HAYDEN. Under the construction schedule, based on the allowance of the budget estimate of $4,800,000, when will you award the prime contracts on the dam and the powerplant?

Mr. DEXHEIMER. We would expect to award the contracts early in the spring of 1958. The balance, the payment under that contract, of course, would accrue after the contract is started, and the balance of the money would be used for payments under other contracts.

Chairman HAYDEN. How many years will be required for the construction of this unit?

Mr. DEXHEIMER. We anticipate the dam and the powerplant would be completed sufficiently to permit initial power generation in fiscal year 1962.

GLEN CANYON UNIT

Chairman HAYDEN. The budget estimate includes $17,300,000 for the Glen Canyon unit.

The justifications will be included in the record.

(The information referred to follows:)

Location.—On the Colorado River in northern Arizona about 4 miles south of the Utah-Arizona boundary and 1.4 miles downstream from the mouth of Wahweap Creek.

Authorization.—Public Law 485, 84th Congress, 2d session, approved by the President April 11, 1956.

Description.—The Glen Canyon unit of the Colorado River storage project is the largest unit of the project. It will help to provide the long-time regulatory storage needed to permit States of the upper division to meet their flow obligation at Lee's Ferry and still utilize their apportioned water. It will also permit production of a substantial amount of the electrical energy needed in the upper basin. Facilities of the unit include Glen Canyon Dam, Reservoir, powerplant, switchyard, and camp. The reservoir will store 26 million acre-feet, and the installed nameplate rating of the powerplant will be 900,000 kilowatts.

Benefit-to-cost ratio.—1.7 to 1.

Summarized financial data

Estimated total obligations	$299,789,838
Ttal obligations to June 30, 1956	([1])
Total obligations, fiscal year 1957	[2]—10,377,000
Total obligations, fiscal year 1958	[3]—17,840,000
Balance to complete	271,572,838

[1] Financed with "General investigation" funds.
[2] Includes $500,000 contribution from State of Arizona and allocation of $600,000 from Bureau of Public Roads.
[3] Includes $540,000 contribution from State of Arizona.

On a cost basis the fiscal year 1958 program will total $15,602,000. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of costs to obligations.

Change in total project costs and obligations

	Costs	Obligations
1957 congressional justification	$421,270,000	$421,050,000
1958 congressional justification	300,615,000	299,789,838
Decrease	120,655,000	121,260,162

The total estimated cost of the Glen Canyon unit has been reduced $120,655,000 as a result of transferring the transmission system to the Transmission Division of the Colorado River storage project, partially offset by an increase of $2,261,000 to provide for the contribution to the civil service retirement fund.

Allocation of estimated total project cost

Reimbursable:	
Irrigation	$17,801,000
Power	281,114,000
Subtotal, reimbusable	298,915,000
Nonreimbursable	1,700,000
Total	300,615,000

Repayment of reimbursable costs

By power revenues	$298,915,000
Total	298,915,000

Repayment contracts.—Entire cost will be repaid from power revenues. It is not anticipated that any power contracts will be executed in fiscal year 1958 and none have been executed to date.

Physical data

Feature	Type	Capacity	Height	Length
Glen Canyon Dam and Reservoir.	Concrete arch	26,000,000 acre-feet	700 feet	1,400 feet.
Glen Canyon powerplant		900,000 kilowatts		

Status.—As of June 30, 1956, construction had not begun. During fiscal year 1957 construction will begin on access roads, the bridge across the Colorado River, the dam, diversion tunnels, spillway tunnels, cofferdams, and camp facilities. Preconstruction work will be active in connection with the powerplant and switchyard. Project investigations in connection with remaining features will continue. As of June 30, 1957, construction will be approximately 3 percent complete.

WORK PROPOSED, FISCAL YEAR 1958

Glen Canyon Dam and Reservoir, $10,672,000.—The program provides for completion of the access roads, the bridge across the Colorado River, the right diversion tunnel, cofferdams, and continuation of excavation for the dam.

Glen Canyon powerplant and switchyard, $580,000.—Work will be continued on final designs, and the prime contract for the dam, awarded in fiscal year 1957, will include excavation for powerplant foundation.

General property, $4,155,000.—The program provides for completion of construction of the permanent camp and procurement of the major portion of office, transportation, stores, shop, laboratory, communication, and work equipment.

Contribution to civil service retirement fund, $195,000.—Initial year contribution to civil service retirement fund.

Adjustments, $540,000.—Represents contribution by the State of Arizona.

Other expenditures and credits, $2,878,000.—Consists largely of expenditures for temporary construction camp, housing, service facilities, utilities, stores, and equipment which will be charged to permanent project features in subsequent years.

Undelivered orders, $100,000.—Represents liquidation of contract obligations incurred in fiscal year 1957.

Schedule of construction program, fiscal years 1957 and 1958—Colorado River storage project, Glen Canyon unit, Arizona and Utah

Program item	Estimated total	Total to June 30, 1956	Program, current year 1957	Program, budget year 1958	Balance to complete
(1)	(2)	(3)	(4)	(5)	(6)
Construction program:					
Glen Canyon Dam and Reservoir	$187,127,000	$686,612	$8,285,000	$10,672,000	$167,483,388
Glen Canyon powerplant and switchyard	106,006,000	72,550	540,000	580,000	104,813,450
General property	5,221,000	66,000	500,000	4,155,000	500,000
Total construction costs	298,354,000	825,162	9,325,000	15,407,000	272,796,838
Contribution to civil service retirement fund	2,261,000			195,000	2,066,000
Total project costs	300,615,000	825,162	9,325,000	15,602,000	274,862,838
Adjustments	−2,465,162	−825,162	−1,100,000	−540,000	
Total cost to appropriation	298,149,838		8,225,000	15,062,000	274,862,838
Other expenditures and credits	1,640,000		2,052,000	2,878,000	−3,290,000
Total expenditures	299,789,838		10,277,000	17,940,000	271,572,838
Undelivered orders			100,000	−100,000	
Total obligations	299,789,838		10,377,000	17,840,000	271,572,838
Method of financing:					
Allocation of appropriation, fiscal year 1957			9,277,000		
Contributions			500,000	540,000	
Allocation from Bureau of Public Roads			600,000		
Funds required				17,300,000	271,573,000

PROGRESS TO DATE

Chairman HAYDEN. For the current fiscal year $9,277,000 was made available for the Glen Canyon unit, and in addition, funds in the amount of $1,100,000 were made available by the Bureau of Public Roads and the State of Arizona for the construction of the bridge.

Mr. Dexheimer, tell the committee what has been done with these funds?

Mr. DEXHEIMER. We have completed the subgrade for an access road from Highway 89 to the dam site, and have recently awarded contract for the surfacing of that road to be able to hold the sandy soil for construction purposes. We have awarded a $4 million contract for construction of the bridge that is to span the canyon downstream from the dam, and made some payments under that for the foundation. We have done some work on the road from the Utah State line down to the dam site in order to have access to it. We have a contract which was awarded about 7 months ago for one diversion tunnel, to take the water around the dam site. We made progress payments under that contract which is about 50 percent completed at this time. We have awarded the contract, just under $108 million, for the construction of the dam and powerplant itself. In addition to that, we have prepared specifications and plans and carried on the necessary negotiations with various groups in connection with the construction of the Glen Canyon unit. We have advertised, and expect to award in the next few days, a contract for the streets and utilities for the town at Page, Ariz., which is very close to the dam site, required in connection with housing the Government, and contractor, employees.

DIAMETER AND LENGTH OF TUNNEL

Chairman HAYDEN. Just out of curiosity, what is the diameter of the tunnel, and how long is it? When will it be finished?

Mr. DEXHEIMER. The right diversion tunnel, which is under contract, varies from 43 to 46 feet in diameter. It is expected that will be completed in about 6 months more, that is, the excavation of it; the lining of the tunnel is included in the main contract.

Chairman HAYDEN. What is the length of the tunnel?

Mr. DEXHEIMER. On the right side about 2,700 feet. On the left side about 2,900 feet. It carries the water from the upstream cofferdam, clear around the dam site to below a cofferdam to be built to block the river.

Chairman HAYDEN. And the first contracts have been let and the first work actually has been done?

Mr. DEXHEIMER. The first contracts were on the access road so we could get in there, but the first major contract was on the right diversion tunnel.

GLEN CANYON DAM CONTRACT

Chairman HAYDEN. Please tell the committee a little bit about the prime contract you have awarded for the construction of the Glen Canyon Dam? How did the awards compare with the estimate, and so on?

Mr. DEXHEIMER. We opened bids on the main dam and powerplant on April 11 of this year.

The low bidder was an eastern contractor, from New York, and the bid price was $107,955,522. The next bidder was a combination of 6 large western and 1 eastern contractor under the name of Glen Canyon contractor, with a bid of $118,336,476. The third bidder, a combination of 9 contractor organizations, was $120,178,153.

The engineering estimate, which is made to be opened at the same time bids are opened, and based on our latest review of estimated prices for labor and material and work, the engineering estimate was $135,608,170. So, the low bidder is approximately 20 percent below the engineering estimate for that particular work.

We have had quite favorable bids on the other work that we have awarded. The tunnel, for example, right diversion tunnel, was 36 percent below our estimates.

STATUS OF BRIDGE BELOW DAM SITE

Chairman HAYDEN. What is the status of the bridge below the dam site, and just how is your cooperative arrangement with the Bureau of Public Roads and the State of Arizona working out? Did you get a low bid on that?

Mr. DEXHEIMER. The bid on the bridge was somewhat higher than our estimate. As a matter of fact, it was about 40 percent higher than our estimate. I think the reason was the short time we allowed, plus the difficulty at that time of getting steel deliveries of the type of steel required within the time limitations.

Chairman HAYDEN. The price of steel has gone up. We had testimony from the Administrator of the Bonneville Power Administration it cost 16 percent more to get steel this year than it did before.

Mr. DEXHEIMER. That is correct. The type of steel we need for the bridge, the structural shape, has gone up about $15 or $20 a ton. We felt that we needed to have that bridge in order to utilize it to the maximum advantage during the construction period, and, of course, it becomes a permanent structure in connection with Highway No. 89 in Utah and Arizona. It is in an area which will become heavily traveled, both from the commercial point of view and from the standpoint of great recreational opportunities.

LOCAL COOPERATION

Chairman HAYDEN. And you received cooperation from the Bureau of Public Roads and the State of Arizona in connection with the construction of the bridge. What was the nature of that cooperation?

Mr. DEXHEIMER. We received excellent cooperation from both the State of Utah and the State of Arizona. In Utah, the Utah Highway Department, with certain Federal assistance, has done the entire job of building the road from Kanab down to the Utah-Arizona State line, about 69 miles. The State of Arizona has cooperated, and we have agreements with them where they share the cost of the access road that will go up through Arizona; they also have agreed to contribute $800,000 for the bridge. The bridge costs are higher, and they have agreed to share a proportion of the increased cost for construction of the bridge across the canyon.

The Bureau of Public Roads, by special legislation, has also contributed $600,000 toward construction of the bridge in lieu of a highway across the top of the dam.

Chairman HAYDEN. As I remember that, the estimated cost of building a highway across the top of the dam was $600,000.

Mr. DEXHEIMER. Yes.

Chairman HAYDEN. And that sum of money was made available for part of the cost of construction of the bridge rather than to build a road across the top of the dam as authorized by law?

Mr. DEXHEIMER. Yes, sir.

ADEQUACY OF FUNDS

Chairman HAYDEN. Is the amount of the budget estimate of $17,300,000 adequate to provide for the most economic rate of construction on this unit?

Mr. DEXHEIMER. Our budget estimate was submitted last fall before we had awarded many of the contracts. At that time, it appeared that would be adequate. Subsequent to that time we awarded these other contracts, and contractors have indicated that they can earn substantially more than we would be able to give them, with the $17 million limitation.

BUDGET BUREAU CUT

Chairman HAYDEN. Was the $17 million what you asked of the budget, or did the budget reduce your request?

Mr. DEXHEIMER. Originally, the Bureau of Reclamation had an estimate for the upper Colorado River fund of about $35 million. In preparing the budget, that fund was cut to $25 million. Actually, of course, we did not have an opportunity to ask.

Chairman HAYDEN. They put a ceiling of $25 million on it. You were told that was all you could have?

Mr. DEXHEIMER. Yes, sir.

Senator WATKINS. May I ask a question?

Chairman HAYDEN. Certainly.

Senator WATKINS. Do you think you could wisely and economically spend more than that?

Mr. DEXHEIMER. Yes, sir; as a matter of fact, with that limitation we will have to limit the amount of money we can make available for contract payments, and the contractors then would probably have to revise their operations, to slow them down to what appears to them to be an uneconomical rate.

Senator WATKINS. It is largely on the assumption that the money would be forthcoming, and that probably reduced the bids you got.

Mr. DEXHEIMER. I think that is correct, Senator Watkins. The contractors, of course, have a tremendous amount of equipment investment, and investment in personnel and other things, and they plan normally to complete a project of that kind as quickly as they can. When they have so much money tied up in equipment, plus the bond they have to carry, it is certainly economical for them to complete it as rapidly as possible.

In addition to that, our experience in the last few years has been construction work of this type and labor costs are going up, 4½ to 8 percent in some years.

Chairman HAYDEN. That is what I was going to ask you. The Government will undoubtedly lose money in the long run by delays if the present trend continues. Each year labor costs and material costs are higher. The longer you put it off, the more it is going to cost.

Mr. DEXHEIMER. Yes. Our experience has been if the contractors are given sufficient funds, they will complete the projects ahead of schedule.

Chairman HAYDEN. And how much money could you spend in the Glen Canyon contract to the best advantage of the Government?

Mr. DEXHEIMER. We could spend about $25 million, rather than the $17 million at Glen Canyon.

NAVAHO UNIT

Chairman HAYDEN. The budget estimate includes $1,800,000 for the Navaho unit.

The justifications will be included in the record.

(The justifications referred to follow:)

Location.—On San Juan River, in northern New Mexico, 3 miles below confluence of Pine and San Juan Rivers, in Rio Arriba County, 16.5 miles upstream from Blanco.

Authorization.—Public Law 485, 84th Congress, 2d session, approved by the President April 11, 1956 (70 Stat. 105).

Description.—The primary purpose of the Navajo unit is to provide irrigation water for the 137,000-acre Navaho project consisting of 109,000 acres of Indian reservation lands and 28,000 acres of nonreservation lands. Facilities of the unit to be built by the Bureau of Reclamation include only the Navaho Dam and the 1,450,000 acre-foot Navaho Reservoir. The dam will be a large earthfill structure and the appurtenant facilities include a spillway and outlet works.

Summarized financial data

Estimated total obligations	$36,887,000
Total obligations to June 30, 1956	[1]
Total obligations, fiscal year 1957	800,000
Total obligations, fiscal year 1958	1,800,000
Balance to complete	34,287,000

[1] Financed with general investigation funds.

On a cost basis the fiscal year 1958 program will total $1,530,000. The narrative justification which follows explains the fiscal year 1958 cost program and the relation of cost to obligations.

Change in total project costs and obligation

	Costs	Obligations
1957 congressional justification	$36,592,000	$36,592,000
1958 congressional justification	36,932,000	36,887,000
Increase	340,000	295,000

The total estimated cost has been increased by $340,000 to include cost of investigations in prior years financed with Colorado River development funds, and the adjustment required for the civil-service retirement fund contribution.

Allocation of estimated total project cost

Reimbursable: Irrigation	$35,634,000
Subtotal	35,634,000
Nonreimbursable:	
Flood control	1,106,000
Recreation	192,000
Total	36,932,000

Repayment of reimbursable costs

By power revenues	$35,634,000
Total	35,634,000

Repayment contracts.—Reimbursable costs of $35,634,000 will be repaid from Colorado River storage project excess power revenues.

Physical data.—

Feature: Navaho Dam and Reservoir:
Type: Earthfill.
Capacity: 1,450,000.
Height: 370.
Length: 3,750.

Status.—As of June 30, 1957, construction will be underway on the access road and Government camp.

WORK PROPOSED, FISCAL YEAR 1958

Navaho Dam and Reservoir, $1,202,000.—This amount provides for obtaining a portion of the right-of-way, contract earnings on the prime contract to be awarded late in the fiscal year, and completion of the access road.

General property, $263,000.—This program will permit completion of the administration buildings and warehouse, permanent housing units, and the water-supply system.

Contribution to civil-service retirement fund, $65,000.—Initial year contribution to civil-service retirement fund.

Other expenditures and credits, $270,000.—These funds are to be expended for the construction of temporary camp facilities and housing units. The cost of these facilities will be distributed to the permanent features of the project in subsequent years.

AERIAL PHOTOGRAPHY AND TOPOGRAPHICAL MAPPING

Chairman HAYDEN. For the current fiscal year, $800,000 was provided for the Navaho unit. What has been done with these funds?

Mr. DEXHEIMER. The aerial photography and the topographical mapping has been done. We have entered into a cooperative agreement with the State of New Mexico for improving an existing highway, and by contributing about $450,000 of the cost of the longer highway, the State of New Mexico agreed to build a road which would give us access into the dam site. We have furthered our work on the designs and specifications for the Navaho Dam, particularly after the State of New Mexico agreed on the capacity of the reservoir that was to be built. We have a contract coming up which has not been awarded as yet, but which we expect will be very shortly for some temporary residences, and some streets and utilities which we will need in that isolated area for the Government workers.

CONTRACT FOR CONSTRUCTION

Chairman HAYDEN. When do you plan to award your prime contract for the construction of the dam?

Mr. DEXHEIMER. We will be prepared to award a contract, depending upon the amount of money made available in the 1958 appropriation act, either toward the end of this calendar year or early next year. The amount that is requested in the budget, if we were given the full amount, would permit us to do that.

Chairman HAYDEN. That is $1,800,000; that is what the House allowed?

Mr. DEXHEIMER. Yes, and that would permit us to award a contract next spring for the construction of the dam.

Chairman HAYDEN. You need more than the $1,800,000 for that purpose?

Mr. DEXHEIMER. We probably would not be ready, Mr. Chairman, to advertise for bids much ahead of that. We could perhaps get the contracts awarded a few months earlier, but we think that is a reasonable schedule for that unit.

Chairman HAYDEN. How many years will be required for the construction of this unit?

COMPLETION DATE

Mr. DEXHEIMER. We expect the schedule will call for the completion of the Navaho Dam and Reservoir at the end of fiscal 1961, based upon starting during this fiscal year. However, that is already delayed 6 or 8 months, so it would run over into fiscal year 1962.

Chairman HAYDEN. What kind of program would we have if the suggestion made by Senator Anderson, that $3½ million be appropriated, how much would that expedite the work?

Mr. DEXHEIMER. Well, I think Senator Anderson had in mind funds for the irrigation futures which are being studied and reported on by the Bureau of Indian Affairs.

Chairman HAYDEN. Have you been able to work out any kind of cooperative agreement with the Bureau of Indian Affairs with respect to the irrigation construction?

What I have in mind, I would imagine that the Bureau of Reclamation is better equipped to undertake some of this work than the Bureau of Indian Affairs.

Mr. DEXHEIMER. Under the present arrangement, the Bureau of Indian Affairs is doing the planning and investigating work for the irrigation projects. However, we have informally agreed and the Secretary, I think, has approved arrangements, whereby the Bureau of Reclamation would build the irrigation works.

INVESTIGATION WORK FUNDS

Chairman HAYDEN. What disturbs me, the Bureau of Indian Affairs is not requesting any money to do the necessary investigation work. Somebody has to do that.

Mr. DEXHEIMER. I think that is what Senator Anderson had in mind.

If I understood correctly, he proposed, I think, $300,000 for the Bureau of Indian Affairs to do the planning work, and to bring the maps up to date, and we expect to cooperate with the Bureau of Indian Affairs in the planning and engineering work so we will fully understand the plans and specifications. I think he intended also, Mr. Chairman, to request additional funds so we could start the construction work as soon as the plan is completed. I think he had in mind around $3 million for the Bureau of Reclamation construction, and $300,000, or something like that, for the additional planning.

Chairman HAYDEN. Senator Watkins, do you have some questions to ask of Mr. Dexheimer?

Senator WATKINS. I do not have any questions to ask about the Navaho project, but I do have some about the Flaming Gorge project.

Chairman HAYDEN. Go ahead.

FLAMING GORGE FUNDS

Senator WATKINS. I was going to ask you, Mr. Dexheimer, about the money for Flaming Gorge. How much could you economically and wisely spend now on the Flaming Gorge?

Mr. DEXHEIMER. Do you mean during the next fiscal year?

Senator WATKINS. Yes.

Mr. DEXHEIMER. Senator Watkins, with the $4,800,000 requested in the budget, as I pointed out to the committee earlier, we could award the contract for the Flaming Gorge Dam early in the spring of 1958, and provide for supporting contracts. Inasmuch as it is quite late in the season before we get the final appropriation bill, it might be too late to increase that greatly, and make any progress.

Senator WATKINS. Is that because of the climatic situation?

Mr. DEXHEIMER. Yes, because if we tried to advertise and award a contract up there during the severe winter, we probably would not be able to make any progress until spring. So, if we can award the contract early in the spring, I think the $4,800,000 will give us sufficient money to meet our present obligations.

ACCESS ROAD

Senator WATKINS. How about the access road and the community that you will have to build for the use of the workers? Can all that be put under the present appropriation?

Mr. DEXHEIMER. No, sir. We have awarded contracts, and the grading on the access road from the Green River Road is fairly well along. We have recently awarded a contract for surfacing a part of that, and we have to surface it in order to hold it during construction. We have also awarded a $2,600,000 contract for the streets, utilities, and some Government housing for the camp at Flaming Gorge, The present fiscal year funds will be exhausted by June 30, by payments under those contracts, and the work we have done on specifications for the dam. We will continue payments under those contracts and payments, of course, under the contract for the dam after it is awarded next spring.

VERNAL PROJECT

Senator WATKINS. With respect to the Vernal project, as I understand that, it is in much the same situation as the Paonia project in Colorado.

Mr. DEXHEIMER. Yes; that is correct. The report is in our office now, we expect it might be submitted to the Budget Bureau very shortly. That will complete the action so far as we are concerned, and we will be ready for construction as soon as requisite repayment contract coverage has been secured.

Senator WATKINS. How much can you wisely and economically spend on this project during the fiscal 1958 year?

Mr. DEXHEIMER. We are prepared to go ahead with a contract for construction at any time. The timing of that contract award would have to be based on the amount of funds available to us.

Senator WATKINS. I understand that. If the funds were available, what could you do?

Mr. DEXHEIMER. Award that contract, and probably utilize up to a million dollars in the next fiscal year, but we might not be able to, depending upon negotiations for repayment contracts. The actual mechanics of getting such a contract executed will take a little time as you know.

You realize the people are strongly in support of it, and it would not be for lack of support. It would be for the mechanics involved in getting approval, voting, and other matters that require time for their execution.

Senator WATKINS. Off the record, Mr. Chairman.

(Discussion off the record.)

Senator WATKINS. I think that is all I want to ask.

TRANSMISSION DIVISION

Chairman HAYDEN. The budget estimate includes $100,000 for the transmission division.

The justification will be included in the record.

(The justification referred to follows:)

Location.—The transmission division of the Colorado River storage project will include the facilities necessary to market power generated by powerplants of the various units of Colorado River storage project and the participating projects.

Authorization.—Public Law 485, 84th Congress, 2d session, approved by the President, April 11, 1956 (70 Stat. 105).

Description.—The primary purpose of the transmission division of the Colorado River storage project is to provide for distribution of electrical energy produced at both the participating project plants and the powerplants of the Colorado River storage project. The facilities will include transmission lines and substations of sufficient size to interconnect powerplants and to distribute power to load centers where power will be delivered, to municipalities, to cooperatives, to States, and to other wholesale customers. Interconnections will be made with transmission facilities of private utilities.

Summarized financial data

Estimated total obligations	$145,540,000
Total obligations to June 30, 1956	(1)
Total obligations, fiscal year 1957	48,000
Total obligations, fiscal year 1958	100,000
Balance to complete	145,392,000

[1] Financed with general investigations funds.

On a cost basis the fiscal year 1958 program totals $100,000 which is explained in the narrative justification which follows.

CHANGE IN TOTAL PROJECT COSTS AND OBLIGATIONS

There is no change in cost except the addition of $1,590,000 for civil-service retirement fund as the transmission division was formerly included in the costs of other units of the project.

Allocation of estimated total project cost

Reimbursable: Power	$145,590,000
Total, reimbursable	145,590,000

Repayment of reimbursable costs

By power revenues	145,590,000
Total	145,590,000

Repayment contracts.—Entire costs will be repaid from power revenues. It is not anticipated that any power sales contracts will be negotiated in fiscal year 1958 and none have been let to date.

Physical data

Feature: Glen Canyon-Flaming Gorge transmission line:	
Capacity (kilovolts)	230
Length (miles)	400

Other lines as needed.

Status.—Investigation work only will be in process through fiscal year 1957.

WORK PROPOSED FISCAL YEAR 1958

Transmission lines and substations, $96,000.—Investigation work will be continued through fiscal year 1958 on the Glen Canyon-Flaming Gorge transmission line along with some work on future transmission lines. Before actual construction of transmission lines is undertaken, it will be necessary to do a considerable amount of preconstruction work, such as network analyzer studies, determination of load centers, aerial surveys for line locations, studies to determine line capacities, rate studies, gathering field and supporting data for final designs of transmission lines, substation requirements and cooperative studies with private utilities.

Contribution to civil-service retirement fund, $4,000.—Initial year contribution to civil-service retirement fund.

ADVANCE PLANNING

Chairman HAYDEN. The estimate includes $1,142,000 for advance planning.

The justification will be included in the record.

(The information referred to follows:)

COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS, ADVANCE PLANNING

Description.—The advance planning program consists of detailed planning studies involving collection of field data, land classification, foundation exploration, topographic mapping, aerial mapping and other engineering and economic studies necessary for the preparation of definite plan reports and start of construction.

Summarized financial data

Estimated total obligations	$3,698,398
Total obligations to June 30, 1956	([1])
Total obligations, fiscal year 1957	1,575,000
Total obligations, fiscal year 1958	1,142,000
Balance to complete	981,398

[1] Financed from general investigation funds.

On a cost basis the fiscal year 1958 program will total $1,195,037. This program is explained in the narrative justification which follows:

Status.—By the end of the current fiscal year, definite plan reports will have been completed for the Vernal unit of the central Utah project and the Paonia project. A supplemental report demonstrating economic feasibility as required by Public Law 485 will have been prepared on the Curecanti unit and planning will be underway on all the remaining participating projects with the exception of the LaBarge project.

WORK PROPOSED, FISCAL YEAR 1958

The requested $1,142,000 for this activity will be used for the collection of field data, including land classification, foundation exploration and topographic surveys, and the performance of engineering and economic studies which are necessary prerequisites to the start of construction. With these funds, the planning activity will be carried forward at a rate which will allow completion of 5 definite plan reports by the end of the fiscal year, 2 in fiscal year 1959 and 3 in 1960. These funds will also provide for any necessary work in connection with the quality of water study required by section 15 of Public Law 485. The storage units and participating projects on which advance planning will be underway are as follows:

Colorado River storage project

Curecanti unit, Colorado, $46,878.—A supplemental report covering the economic feasibility of the unit as required by Public Law 485 will have been completed by the end of the prior year. The program for fiscal year 1958 will permit processing the supplemental report and performing any necessary studies arising from congressional consideration of that report, as well as completing the definite plan report.

Participating projects

Central Utah project, Utah, $329,515.—The program provides for continuation of detailed studies and surveys on remaining units of the initial phase.

Emery County project, Utah, $23,174.—This program will provide for advertising for bids on a contract for photogrammetric mapping of the project lands and continuation of engineering and economic studies, detailed land classification work, and negotiations with water users leading up to a definite plan report in fiscal year 1960.

Florida project, Colorado, $74,109.—Topographic mapping, detailed land classification, and related engineering and economic studies were initiated in fiscal year 1957. The fiscal year 1958 program contemplates continuing those studies leading to completion of a definite plan report during the following fiscal year.

Hammond project, New Mexico, $100,303.—As a continuation of the planning performed in fiscal year 1957, work will be underway in fiscal year 1958 on detailed engineering and economic studies, preparation of plans and estimates and negotiations with the local interests with the objective of completing the definite plan report by the end of the year.

LaBarge project, Wyoming, $5,347.—During fiscal year 1958 negotiations with the water users and preconstruction studies leading to a definite plan report in fiscal year 1960 will be started.

Lyman project, Wyoming, $10,000.—This program will provide for continuation of negotiations with water users and initiation of detailed land classification

surveys and other fieldwork. Topographic mapping of project lands by photogrammetric mapping is also scheduled to be advertised for bids. The definite plan report on the unit is to be completed in fiscal year 1960.

Paonia project, Colorado, $30,067.—A definite plan report will be completed during the current fiscal year. During fiscal year 1958 preconstruction surveys and negotiations with the water users are scheduled to continue.

Pine River project extension, Colorado-New Mexico, $105,601.—During fiscal year 1958, work will be completed on the detailed economic and engineering studies, designs, and estimates will be prepared and a definite plan report completed in anticipation of starting construction the following fiscal year.

Seedskadee project, Wyoming, $310,649.—Detailed surveys and studies necessary for the preparation of a definite plan report and final designs and specifications are underway during the current year. The fiscal year 1958 program contemplates continuation of these studies and completion of the definite plan report.

Silt project, Colorado, $40,000.—This program will provide for the continuation of detailed engineering and economic studies and the preparation of designs and estimates with the objective of completing the definite plan report by the end of fiscal year 1959.

Smith Fork project, Colorado, $62,394.—During fiscal year 1958 the detailed preconstruction studies will be completed and a definite plan report prepared. Repayment negotiations will also be carried on with the water users.

Quality of water studies, $20,000.—Section 15 of Public Law 485 directed the Secretary of the Interior to continue the study of the quality of water in the Colorado River Basin and to make a report thereon to the Congress and the States of the Colorado River Basins. This will be a cooperative study between the Bureau of Reclamation and the Geological Survey. The amount shown for fiscal year 1958 will provide for the Bureau's participation in this program.

Contribution to civil service retirement fund, $37,000.—These funds are required for initial contribution to the civil service retirement fund as required by Public Law 854.

Other expenditures and credits, —$53,037.—Represents credits for prior year expenditures for service facilities and stores which are being charged to specific investigations in fiscal year 1958.

Schedule of construction program, fiscal years 1957 and 1958—Colorado River storage project and participating projects, advance planning

Program item	Estimated total	Total to June 30, 1956	Program, current year 1957	Program, budget year 1958	Balance to complete
(1)	(2)	(3)	(4)	(5)	(6)
ADVANCE PLANNING					
Colorado River storage project: Curecanti unit, Colorado	$343,000	$174,217	$121,905	$46,878	
Participating projects:					
Central Utah (initial phase)	2,170,000	1,390,010	450,475	329,515	
Emery County, Utah	267,000	32,317	10,000	23,174	$201,509
Florida, Colo	253,000	33,891	91,000	74,109	54,000
Hammond, N. Mex	185,000	70,701	13,996	100,303	
La Barge, Wyo	235,000	85,729		5,347	143,924
Lyman, Wyo	510,000	111,401	4,700	10,000	383,899
Paonia, Colo	316,000	15,633	270,300	30,067	
Pine River extension, Colorado-New Mexico	284,000	94,699	83,700	105,601	
Seedskadee, Wyoming	1,110,000	441,430	357,921	310,649	
Silt, Colorado	157,000	71,640	6,155	40,000	39,205
Smith Fork, Colorado	202,000	100,934	38,672	62,394	
Quality of water	190,000		20,000	20,000	150,000
Contribution to civil service retirement fund	86,000			37,000	49,000
Total cost	6,308,000	2,622,602	1,468,824	1,195,037	1,021,537
Adjustments	−2,622,602	−2,622,602			
Total cost to appropriation	3,685,398		1,468,824	1,195,037	1,021,537
Other expenditures and credits			106,176	−53,037	−53,139
Total expenditures	3,685,398		1,575,000	1,142,000	968,398
Total obligations	3,685,398		1,575,000	1,142,000	968,398
Method of financing:					
Allocation of appropriation, fiscal year 1957			1,575,000		
Funds required				1,142,000	968,000

STATUS OF PLANS

Chairman HAYDEN. What is the status of the plans on each of the participating projects, and what is the schedule completion date on each?

Mr. DEXHEIMER. On the Central Utah project, one of the participating projects, we propose a program of $329,515 to carry on detailed surveys and planning for that. The same thing applies to most of the other participating projects, that is, the carrying on of the advance planning details in engineering, economic studies, detailed land classification and negotiations with water users, leading to repayment contracts and allied jobs.

AGRICULTURE DEPARTMENT STUDY OF PROJECTS

Chairman HAYDEN. I understand that the Department of Agriculture, under a directive from the President, is making a study of the irrigation benefits of each of the participating projects. Is that correct?

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. Is there anything in the authorizing act calling for such a study by the Department of Agriculture?

Mr. DEXHEIMER. No, sir.

Chairman HAYDEN. What is the status of these studies?

Mr. DEXHEIMER. The ones for the Paonia unit and the Vernal unit of Central Utah have been completed. The others are progressing, and they will be cooperatively done with the Agriculture Department.

Chairman HAYDEN. What is the source of funds for these studies?

Mr. DEXHEIMER. Our funds, of course, are included in the advance planning budget estimate.

Chairman HAYDEN. And does the Department of Agriculture use any of its own money?

Mr. DEXHEIMER. They are utilizing their own funds for their part of the work.

Chairman HAYDEN. I have two documents from the Department of Agriculture on this subject.

One is the plan of work, interagency coordination, United States Department of Agriculture, State Agricultural Colleges, Colorado River storage project.

Then, I have one on the United States Department of Agriculture activities in connection with the Colorado River storage project participating projects. I will include these two documents in the record.

(The documents referred to follow:)

UNITED STATES DEPARTMENT OF AGRICULTURE ACTIVITIES IN CONNECTION WITH COLORADO RIVER STORAGE PROJECT PARTICIPATING PROJECTS

The purpose of the following material is to summarize the basis for and the nature and scope of special USDA activities that are occasioned by and related to the Colorado River storage project.

Public Law 485, 84th Congress, approved by the President on April 11, 1956, authorized the Colorado River storage project and 11 participating irrigation projects. It also established a planning priority for 25 additional projects in the Colorado River Basin.

Referring to a provision in a draft bill upon which this legislation was based, the President, in a letter to the Secretary of Agriculture dated March 19, 1954, stated, "Under existing law, responsibility for the reclamation program rests

with the Secretary of Interior. Therefore, the final recommendation concerning the economic justification of the projects to be reappraised will be made by him. However, because of your statutory responsibilities for the Nation's agricultural program and the wide range of technical skills in your Department, I request you to take the lead in the substantive aspects of the joint survey of the agricultural benefits of these projects. I assume that the survey will relate the proposed projects to the general agricultural economy of the upper Colorado Basin. I suggest that the services of the State agricultural colleges of the region be utilized in the survey."

Arrangements between the Department of Agriculture and the Department of the Interior have been agreed on for field cooperation on the authorized projects. The provisions of the general agreement between the two Departments with regard to the authorized projects are incorporated in a jointly agreed upon statement, copies of which have been furnished their respective field organizations. Further consideration is to be given by the two Departments to applying this agreement to future participating projects. The jointly agreed upon statement follows:

"CONSIDERATIONS RELATING TO REAPPRAISAL OF DIRECT AGRICULTURAL BENEFITS

"The President in his letters of March 19, 1954, requested a cooperative survey by the Departments of Interior and Agriculture to reappraise the direct agricultural benefits to be produced by the participating projects[1] of the Colorado River storage project. The project has now been authorized by the act of April 11, 1956, Public Law 485, 84th Congress.

"Discussion of this matter in Washington has led to the conclusion that the field forces of the two Departments could best undertake the cooperative survey under general guidelines rather than specific directives. Such guidelines follow.

"The Departments intend to comply fully with the terms of the President's letters.

"Full utilization is to be made by both Departments of basic data, analyses, studies, and other information now available in either Department. Any additional data or information required for an adequate appraisal of the projects will be obatined with a minimum of time and cost.

"The Bureau of Reclamation will prepare a definite plan report for each participating project which encompasses the project investigations leading to the feasibility reports and supplement those findings through advance planning and preconstruction activities which are directed to the adequacy and soundness of the engineering and economics of the general plan of development. This will include an appendix covering agricultural economics which would take into consideration information developed by the cooperative survey.

"Advance planning activities are scheduled at a rate which will allow completion of 4 definite plan reports in fiscal year 1957, 2 in fiscal year 1958, and 3 in fiscal year 1959. Design data will be collected and specifications prepared for four participating projects which will permit award of contracts and start of construction early in the following year, fiscal year 1958. In addition, similar work on one other participating project will be in progress, leading to award of a construction contract late in fiscal year 1958.

"The Department of Agriculture will study and report, for each project, on a sample farm or area basis, the soil capabilities for irrigation; the present and future land use and production pattern; the costs associated with onfarm irrigation development; most suitable size and type of farm; net farm returns with irrigation; and the direct agricultural benefits. It will study and report on other problems, such as drainage and soil salinity, and on the relation of the proposed projects to the general agricultural economy of the upper Colorado River Basin and the Nation. It also will study the impact of reservoir, canal, and powerline construction and irrigation development on the forest, range, and recreational resources of the national forests, the impact of irrigation on the grazing resources, and the relationships of watershed protection measures to the newly constructed reservoirs and irrigation works.

"In addition to the foregoing studies which are directly related to the reappraisal of the direct agricultural benefits or to the impacts of the projects, the

[1] Central Utah (initial phase), Emery County, Fla., Hammond, La Barge, Lyman, Paonia (including the Minnesota unit, a dam and reservoir on Muddy Creek just above its confluence with the North Fork of the Gunnison River, and other necessary works), Pine River extension, Seedskadee, Silt, and Smith Fork.

Department of Agriculture will carry out its normal responsibilities such as research on irrigation problems, provisions of technical assistance and credit to farmers, watershed protection and flood prevention work, and administration of national forests."

This statement was forwarded by the Under Secretary of Agriculture to the Administrator of the Soil Conservation Service on July 31, 1956, with instructions to proceed. Following staff discussions by representatives of the SCS, FS, and ARS, the Administrator of the SCS wrote the Chief of the FS and Administrator of the ARS on August 9, 1956, that:

"We are proceeding with this assignment in accordance with the memorandum of understanding between our services relating to interagency coordination of programs in watersheds as authorized by section 6 of Public Law 566, 83d Congress, completed on February 2, 1956."

As called for in that memorandum of understanding, a Washington advisory committee had previously been established consisting of George R. Phillips, Chief, River Basins Branch, SCS, chairman; Warren T. Murphy, Chief, Division of Flood Prevention and River Basin Programs, FS; Harry A. Steele, Head, Land and Water Section of Production Economics Research Branch, ARS.

A field advisory committee for the Colorado River storage project work was then established consisting of Harold B. Elmendorf, SCS, chairman; Henry L. Lobenstein, FS; Clyde E. Stewart, ARS.

Dr. D. Wynne Thorne, of the Utah State Agricultural College and representing the agricultural colleges of Colorado, New Mexico, Utah, and Wyoming is participating as a member of that committee.

A plan of work, as provided for in the memorandum of understanding between the SCS, FS, and ARS, has been prepared and is now in effect.

A basin field party, headquartered at Salt Lake City, Utah, will be responsible for the technical aspects of work undertaken, will plan and schedule work to be done, will arrange for collection of information, will analyze data, and will prepare reports on the various participating projects. The members of this party are Albert J. Webber, SCS, party leader; Joe W. Kingsbury, SCS, soil scientist; William E. Anderson, SCS, engineer; Fred O. Case, SCS, soil conservationist; an economist from ARS (yet to be designated).

A study of the impacts of Colorado River storage projects works upon the national forests is being made by the Forest Service as a part of the overall survey.

Full utilization is to be made by both Departments of mutually acceptable basic data, analyses, studies, and other information now available in either Department. Any additional data or information required for an adequate appraisal of the projects will be obtained with a minimum of time and cost.

UNITED STATES DEPARTMENT OF AGRICULTURE ACTIVITIES IN THE BASIN

There are briefly described below the special Department of Agriculture activities in the Upper Colorado Basin relating to land and water resource use, development, protection, and management under the provisions of section 6 of Public Law 566 which will be carried out cooperatively with the Bureau of Reclamation in developing the best practical project plan for each participating project. Reference is also made in the latter portion of the statement to the regular activities of the Department which need intensification and acceleration in the Upper Colorado River Basin because of the construction of the Upper Colorado storage project.

I. Special activities of the United States Department of Agriculture in the Upper Colorado River Basin

A major development such as that contemplated in the Upper Colorado Basin poses many problems for agriculture and for the United States Department of Agriculture. The development will have many impacts on, and will be affected by national forest resources and management and the use and management of the watersheds of the basin. Erosion and uncontrolled runoff from these watersheds may cause damage to reservoirs and irrigation works. There is also the problem of fitting the new developments into the existing farming and ranching pattern.

In recognition of such impacts of basin development programs, section 6 of the Watershed Protection and Flood Prevention Act authorizes the Secretary to make investigations and surveys of watersheds of rivers as a basis for development of coordinated programs. The two kinds of special activities to be undertaken in the upper Colorado River Basin are: (*a*) An evaluation of direct agricultural benefits expected from participating projects, and (*b*) studies of the impacts of all

projects in the Upper Colorado storage project upon lands and programs administered by the United States Department of Agriculture.

A. Evaluation of direct agricultural benefits expected from participating projects.—The objective of each project area study will be to provide an agricultural foundation for the evaluation of expected agricultural benefits from various kinds of land and for alternative potential scales of irrigation development. In providing the type of foundation required for project analysis, detailed information will be required on the productivity and response of project soils to irrigation, prospective type of agricultural production, types, and sizes of farm operating units in prospect, and the returns to be anticipated. The required data would be developed from detailed study of carefully selected samples of irrigated lands and irrigation farms in the area and of land to be irrigated. For each sample area (farm or parcel of land) data will be collected or developed on the adaptability of soil for irrigation, present land-use and cropping system, agricultural production, and returns from irrigation farming. Using these data as a factual base, projections would then be made of prospective future cropping patterns, crop and livestock production, farm operation costs, and irrigation development costs for these lands and farms under future economic conditions anticipated during the life of the project. From this study, estimates of irrigation benefits will be derived, which in turn will provide reasonable estimates of net returns that would be available for family living, to pay water charges, and for debt service for various kinds of land.

In addition to the detailed study of project lands and project farms, an analysis will be made of the aggregate agricultural production from each project area in relation to local, regional, and national markets. This will help to indicate the most desirable type of agricultural development on specific project lands. A summary analysis of all project areas will provide additional insight on the impacts of the development on the regional and national economy.

The specific kinds of investigations contemplated in connection with the evaluation of direct agricultural benefits expected from participating projects are the following:

1. Soil serveys: Existing soil-survey data and Bureau of Reclamation land classifications will be reviewed and supplemented by field surveys as needed to reach mutual agreement on the soil-type variations within each irrigable land class in order to recommend adapted crops and estimate expected yields of those crops for the different soil groups within each irrigable land class. An adequate sample, perhaps 10 percent of the area, properly distributed, will provide a representative sample for estimating the agricultural benefits, outlining development problems and agricultural opportunities, providing a basis for technical guidance by the Department during and after project development. It is realized that the amount of sampling necessary will vary by projects and between new lands and areas to be supplied with supplemental water.

A special feature of the soil survey will be an analysis of soil salinity. This analysis is necessary to determine the suitability of soil for agricultural use under irrigation and to assist in determining needs and effectiveness of drainage on those lands to receive supplemental water.

2. Land-development planning: Land-development plans will be prepared for each of the sample farms or areas selected. These plans will include a preliminary estimate of the cost of land preparation and the construction of farm irrigation ditches and drainage layout. These will be on the same sample farms or areas on which detailed soils information has been secured. It is assumed that the Bureau of Reclamation will supply topographic maps in the detail necessary for farm-development planning. In cases where necessary maps are not available, this Department will make arrangements to obtain them to facilitate the planning work. This type of planning for land preparation on a sample farm or area basis will follow generally the cooperative plan developed on several areas on the Platte River in Nebraska where the selection of sample farms and land-development planning has been worked out by the Soil Conservation Service and the Bureau of Reclamation.

3. Economic analysis: An analysis will be made of the sample farms and sample areas to determine the existing use, cropping pattern, yields, production costs, and farm income under the present system of farming without the proposed project. This will give a base against which to compare the effects of the project. Included in this analysis will be deterioration or improvement expected to take place in the future without the project. Based on soil-classification and land-development plans, analyses will be made of crop rotations, yields, and livestock production to estimate farm returns under irrigation. Included will

be a computation of associated costs, such as costs of land development, drainage, buildings, fences, equipment, livestock, and temporary losses of production. The end result of the analysis will be an estimate of the net farm income with irrigation available for debt service, family living, and payment of water charges based on the size and type of farm considered most likely to succeed and direct agricultural benefits creditable to the project. Any unusual economic or credit problems likely to be encountered in the development period also will be indicated.

4. Drainage: Drainage investigations will be carried out on a sampling basis jointly with the Bureau of Reclamation to delineate the soils and topography involved in representative drainage problems. These samples will not necessarily be the sample farms used for detailed planning but will be selected on the basis of drainage needs. A limited amount of topography and detailed soils coverage will be needed on the samples selected. Investigations will include the location of outlets and studies of water-table fluctuations and of subsoil and geological conditions to estimate the effectiveness of drainage. Consideration will also be given to on-farm drainage problems.

B. *Project impact studies.*—In addition to the detailed study of sample project lands and farms, an analysis will be made of the aggregate agricultural production expected from each project area in relation to local, regional, and national markets. This will help provide a guide for cropping patterns and livestock enterprises that might be considered for specific project lands. A summary analysis of all project areas will provide additional information on the impacts of the total development on the regional and national economy.

Important in the planning and construction of projects is a study of their relationships to the surrounding economy. This will be designed to evaluate the effects of these projects on recreational resources of the area, the influence of irrigation on adjacent grazing areas, and the relationships between watersheds and the newly constructed reservoirs and irrigation and other works. Objectives are described in more detail under the following headings:

1. Watershed studies: Watersheds adjacent to the areas to be developed for irrigation, and especially above authorized canals, diversion works, and reservoirs, are important to the planned and efficient operation of the irrigation projects. In the Colorado River Basin flash floods from impaired watersheds or uncontrolled streams often damage irrigation works, fill canals with sediment, eroded leveled fields, and deposit debris on croplands. Deposition of sediment also shortens the useful life of reservoirs. The probability of flood occurrence and accelerated erosion on adjacent watersheds is therefore a significant factor in determining costs of operation of irrigation facilities and the useful life of reservoirs. Probable costs of minimizing and preventing local flood and erosion damages to the authorized irrigation facilities as well as to the lands to be developed for irrigation will be determined as part of the survey by the Department of Agriculture in appraising the agricultural benefits of this project. Important items to consider in this phase of planning are:

(*a*) Hazards to canals and other structures installed for delivery of irrigation water to use areas that will be caused by watershed conditions.

(*b*) Loss of storage capacity in reservoirs due to sedimentation.

(*c*) Severance damage to farm units caused by location of canals and other structural measures for delivery of irrigation water.

The basin survey party will have responsibility for determining needed watershed protection measures as well as for developing the data related to irrigated lands.

2. Impacts on national forests: Equally important is the determination of impacts of the projects of national forest resources and management. A large part of the project storage, diversion, power, and other works will be within national forests. Particularly important will be the determination of the impact of these authorized works on existing physical improvements and management facilities on the national forests. Determinations will be made of the need for replacement of services provided by such improvements and facilities, the cost of such replacements, and the effect of the replacements on current and future operations of the national forests. The improvements and facilities would include:

(*a*) Roads and trails.

(*b*) Administrative improvements such as ranger station buildings, telephone lines, fences, etc.

(*c*) Recreation improvements such as camp facilities, picnic area units, various special uses including summer homes, organizational camps and others.

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(*d*) Range improvements for livestock and wildlife.
(*e*) Research and administrative study improvements.

An appraisal will be made of the probable impacts of new reservoir development, of the increased accessibility of the national forests, and of the increased population expected as a result of construction of the works authorized for the 11 participating projects. Such impacts will be reflected in greater fire risks and intensified use of adjoining national forest areas for recreation and the facilities and manpower necessary to accommodate these increases. Another important impact is the probable influence on grazing use and requirements on the national forests as a result of changed agricultural use in the project areas. Impact considerations on resources will include, in addition to overall plans for development, operation, and maintenance, those having to do with—

(*a*) Recreation and protection of public health and property.
(*b*) Fire protection.
(*c*) Wildlife.
(*d*) Range livestock.
(*e*) Timber resources.
(*f*) Water resources.

3. Impact on regional and national economy: An analysis will be made of the impact of the upper Colorado River development on the local, regional, and national agricultural economy. Reconnaissance studies would be made which together with data from the sample farm studies would provide the basis for project, regional, and national estimates of the impact of the development and of total agricultural benefits. These studies would also provide data on the relation of crop production under proposed irrigation to national supplies and requirements for these crops. Studies would also be made of the relation of the irrigation development to livestock production in the surrounding areas.

AGENCY ACTIVITY ASSIGNMENTS

The special activities described above will be carried out by the Soil Conservation Service, the Forest Service, the Agricultural Research Service, the Farmers' Home Administration, and the agricultural colleges.

The Soil Conservation Service will carry out the activties connected with soil surveys, land development plans, and drainage. The Soil Conservation Service and the Forest Service will carry out the watershed and impact studies, in accordance with their assigned responsiblities. The Agricultural Research Service will make the economic analysis of project lands, will appraise the impacts of the projects on the regional and national economy and will cooperate with the SCS in salinity analyses. The Farmers' Home Administration will cooperate with the SCS and the ARS on agricultural credit matters in project area studies. The agricultural colleges will provide pertinent available information, participate in field investigations, and act as an educational medium. Certain phases of the various activities assigned to a specific agency will require assistance from the other agencies participating in the joint study. Appropriate correlation will be maintained with Department of the Interior agencies.

Reconnaissance review of each project and the determination of the extent to which detailed sampling and analysis is desirable under the various phases of work outlined will be made by the basic survey party and additional personnel from the agencies involved in the program, as needed. Detailed analysis and review of sample areas will be made by the survey party or by personnel provided by the SCS State offices or other agencies.

II. Regular technical and research services of the USDA in the upper Colorado Basin

In addition to the special types of activities described above, other types of agricultural services are needed on a continuing and expanded basis to help assure a sound and prosperous agricultural economy in the upper Colorado Basin. These additional activities are carried out nationally as integral parts of regular USDA research, extension education, technical services, and agricultural credit programs, but their acceleration will be needed in the area to keep pace with expanded agricultural development expected to result from the upper Colorado project.

An expanded program of agricultural research directed toward problems of soil and water management on farm, range, and forest land; crops and livestock production; the economics of farming and land use; and marketing is particularly needed in the upper Colorado Basin as the region develops over the next several

decades (1) to provide adequate guidance for planning and designing irrigation projects which are not scheduled for immediate installation; and (2) to solve agricultural problems encountered after irrigation systems are installed and an agricultural industry established.

Many problems of soil and water management, being highly complex, require long periods of study before adequate solutions are assured. This fact emphasizes the need for undertaking research projects at an early date.

PLAN OF WORK, INTERAGENCY COORDINATION—UNITED STATES DEPARTMENT OF AGRICULTURE, STATE AGRICULTURAL COLLEGES, COLORADO RIVER STORAGE PROJECT

INTRODUCTION

The President of the United States on March 19, 1954, directed the Secretary of Agriculture to join with the Secretary of the Interior in reappraising the agricultural benefits expected to be produced by the participating projects of the Colorado River storage project. The President suggested that the State agricultural colleges take part in this survey. The Secretaries of Interior and Agriculture have agreed on a basis for carrying out these studies. The Department of Agriculture will cooperate in the studies under the provisions of section 6 of the Watershed Protection and Flood Prevention Act of 1954.

The participating projects referred to include the irrigation projects of the Colorado River storage project which was authorized by Public Law 485, 84th Congress. Most of these participating projects will furnish supplemental water to presently irrigated lands. Water also will be furnished to new lands on most of the participating projects.

The purpose of this survey is to review the preliminary project reports, reappraise the expected agricultural benefits from projects, study impacts of these projects on the upper Colorado River Basin, and assist the Bureau of Reclamation in developing the best practical project plan for each participating project. The Department of Agriculture will investigate the agricultural phases of these projects in cooperation with the Bureau stressing the suitability of lands for irrigation, the productive value of water, and other elements which will influence the success of these projects.

The study will be scheduled so information and findings on the agricultural phases of these projects can be furnished to the Bureau as needed in its development of definite project plans.

The survey will be carried out within the Department of Agriculture in accordance with the memorandum of understanding dated February 2, 1956, between the Soil Conservation Service, Forest Service, and Agricultural Research Service (copy attached). Other State and Federal agencies will be invited to participate in the study of specified problems. State agricultural colleges will participate on the basis described later in this plan of work.

The general area involved in this survey is the upper Colorado River Basin, The projects to be studied are in Utah, western Colorado, southwestern Wyoming, and northwestern New Mexico.

WORK TO BE ACCOMPLISHED

Projects fall into two categories:

1. Eleven participating irrigation projects authorized for construction by Public Law 485, 84th Congress.
2. The storage projects where there will be impacts on land use.

The Department of Agriculture will study and report, for each participating project, on a sample farm or area basis, on the soil capabilities for irrigation; the present and future land-use and production pattern; the costs associated with on-farm irrigation development; most suitable size and type of farm; net farm returns with irrigation; and the direct agricultural benefits. It will study and report on other problems, such as drainage and soil salinity, and on the relation of the proposed projects to the general agricultural economy of the upper Colorado River Basin and the Nation. It also will study the impact of reservoir, canal, and powerline construction and irrigation development on the forest, range, and recreational resources of the area, the impact of irrigation on the grazing resources, the relationships between watersheds and the newly constructed reservoirs, irrigation works, and related facilities, and the impact upon the administration and management of lands under the jurisdiction of the USDA.

Deteriorated watersheds may constitute important hazards to project facilities and to their future operation and maintenance. Project facilities may so disturb watersheds as to require installation of watershed-protection measures. Reconnaissance studies will be made of those watersheds or portions of watersheds where such conditions are considered so serious as to constitute an important threat to project improvements, to operation and maintenance, or to the watersheds. Areas to be studies will be selected by reconnaissance methods. More detailed studies of watershed areas so selected will include appraisal of watershed conditions, approximate degree of possible flood and sediment damages, corrective treatments needed, and estimates of the cost of such work. The Department of Agriculture will include the results of these particular studies in its reports on the projects.

In addition to the foregoing studies which are directly related to the reappraisal of the direct agricultural benefits or to the impacts of the projects, the Department of Agriculture and State agricultural colleges will carry out their normal responsibilities such as research on irrigation and watershed management problems, provision of technical assistance and credit to farmers, watershed protection and flood-prevention work, and administration of national forests.

PROCEDURES

A USDA field advisory committee for Colorado River storage project has been created to maintain appropriate liaison with the administratively responsible officers of their respective services and the State agricultural colleges, and to facilitate the coordination of activities by their respective services and the colleges in carrying out this survey. Each member will keep responsible officers of his agency informed on progress of the survey and on what will be needed to meet the survey schedule efficiently. This committee is composed of Harold B. Elmendorf, Soil Conservation Service, chairman; Henry L. Lobenstein, Forest Service; Clyde E. Stewart, Agricultural Research Service; and D. Wynne Thorne, representing the State agricultural colleges.

The field advisory committee will be responsible for field coordination of Department survey activities and procedures, for arranging for field review of recommendations and reports, for arranging for necessary expert consultation, for overall relationships with the Bureau of Reclamation and other interested State and Federal agencies, and for arranging for overall schedules for work on the participating projects.

A field party consisting of a party leader, soil scientist, civil engineer, and soil conservationist from the Soil Conservation Service, and an agricultural economist from the Agricultural Research Service, and augmented from time to time as needed by specialists from Department agencies and the agricultural colleges, will have principal responsibility for the agricultural and watershed impact phases of this survey. The party leader, under administrative direction of the Soil Conservation Service member of the committee, will be responsible for working relationships with all interested agencies, scheduling of work and coordination of activities of specialists on the field party, preparaion of reports, and for other matters pertaining to the work of the field party.

Analysis of the impact of project construction and operation upon national forests, upon rangelands within national forests, and rangelands adjacent to national forests which are administered in conjunction with them, and upon other forest lands will be a responsibility of the Forest Service with assistance from other Federal agencies and the States.

Generally, public information regarding the purposes and progress of this survey will be released through the press and other channels of information by State conservationists, regional foresters, and other responsible officers of USDA agencies and State agricultural colleges. The committee will assist by furnishing pertinent information as needed by these officers. This does not preclude the party leader or committee members from furnishing general information requested by an accredited member of the press or other informational media. Care will be exercised at all levels to insure that results of these studies will not be released to the general public until appropriate clearance is obtained.

The committee will maintain liaison with State directors of the Farmers' Home Administration and make arrangements with the appropriate State director when his assistance is needed on a specific problem. The committee will also keep other interested State and Federal agencies informed regarding this study.

State agricultural colleges in Colorado, New Mexico, Utah, and Wyoming will participate actively in the work of this field advisory committee and in the survey. Their participation is described in a later section.

Findings and draft reports will be discussed with field offices of the Bureau of Reclamation as early as possible on an informal basis. Formal reports on each project will be prepared by the field party and submitted to the field advisory committee. After appropriate field review, these reports will be submitted to the Washington advisory committee.

SOIL CONSERVATION SERVICE RESPONSIBILITIES

The Soil Conservation Service will supply personnel as indicated above to the field party. In cooperation with other USDA agencies such as the Agricultural Research Service, Forest Service, Farmers' Home Administration, and the State agricultural colleges, Soil Conservation Service will give particular attention to the following aspects of the survey:

1. Soils information needed to judge the suitability of lands for long-continued irrigation and to determine their adaptability for specific crops and farming systems.

2. Feasibility and costs of clearing, land leveling, farm irrigation ditches, drainage, and other development items needed to bring new lands under irrigation and improve presently irrigated lands to get the maximum benefits from the available water supply.

3. Determining crops adapted to the project, the most practical farming systems, and crop yields which can be expected with the water supply expected to be available.

4. Determining irrigation requirements on the farm, the adequacy of present water supplies, and the on-farm need for supplemental water.

5. Appraising the relationships of watershed conditions to development and operation of the participating projects.

6. Calling the attention of the Agricultural Research Service, in accordance with established procedures, to research that is needed under regular research programs in connection with the development and management of project lands under irrigation where such investigations offer promise of aiding project development and operation.

FOREST SERVICE RESPONSIBILITIES

A large part of the storage, water distribution and hydro power installations will be located within or adjacent to national forests. Project construction and operation will have many impacts upon existing facilities and management services on these public lands.

Some services now provided which will be made inoperable because of project construction will need to be replaced as a part of project construction. Changed conditions resulting from project construction will significantly affect future uses of forage, timber, wildlife and recreational resources on national forests and other forest lands. Improved access, increased population and the lure of water impoundments will create a need for additional physical improvements, intensification of protection against fire and enlarged management services.

The United States Forest Service will give particular attention to the following phases of the study:

1. Determining the need for replacement of services provided by existing facilities on national forests, the cost of such replacement and the effect upon management and protection.

2. Appraising the effect of project development upon present and potential future uses of national forest resources including timber, forage, recreation and wildlife. In cooperation with State forestry agencies make a similar appraisal of such effects on non-Federal forest lands affected by the projects.

3. Determining the need for additional facilities and services on national forests which will be created by project construction and operation. Preliminary plans and cost estimates will be developed for each project where applicable.

4. Cooperating with the Bureau of Reclamation, National Park Service, other Federal agencies, and the States in determining the need for additional recreational and wildlife management facilities on other forest lands (including such facilities in areas adjacent to national forests where the facilities may affect national forest use and management) which will be created by project construc-

tion and operation. Assist these agencies in developing plans and cost estimates.

5. Studying the relation between national forest watershed lands and project improvements. Prepare plans for corrective watershed treatment within national forests including estimated costs for critical watershed areas where the probability of flood occurrence and accelerated erosion present significant hazards to future operation and maintenance of project facilities and irrigation developments and where construction of project facilities may necessitate the installation of watershed protection measures.

Assisting the Soil Conservation Service and other Federal and State agencies on like studies of other watershed lands tributary to projects.

6. Appraising the need for research under regular research programs concerning soil and water management on forest lands where such investigations offer promise of aiding project development and operation.

AGRICULTURAL RESEARCH SERVICE RESPONSIBILITIES

The Production Economics Research Branch of the Agricultural Research Service will furnish the economist on the field party and other agricultural economists as needed to carry out the economic investigations for the survey. It will have primary responsibility for the economic phases of analyses and determinations of direct benefits that may be expected from agriculture on the participating irrigation projects. It will also assist as needed on the reconnaissance studies of watershed impacts on project facilities. The Soil and Water Conservation Research Branch of the ARS will participate in a consulting capacity on problems concerning soil and water management, salinity, and watershed hydrology that are encountered in these investigations.

These responsibilities will be carried ont wherever feasible in cooperation with other USDA agencies, the State agricultural colleges, Bureau of Reclamation, and other agencies. Features of the survey to which ARS will give special attention are:

1. On the basis of physical and economic data compiled by the survey, determining the direct benefits that may be expected from agriculture on each participating irrigation project.

2. Cooperating with other members of the field party in developing procedures and techniques for obtaining the data necessary for an appraisal of agricultural benefits.

3. Cooperating with agronomists and other specialists in deriving crop and livestock production rates that can be expected on each project under significant soil, water, and management conditions.

4. Collecting work data from farmers on sample farms in areas proposed for supplemental water and in established areas which are comparable to new lands proposed for irrigation. These data will serve as a partial basis for projecting farm sizes and types on the participating projects, cropping patterns, yields, and practices, and the effects of additional water on farm incomes.

5. Developing local projected prices and costs for use on each participating project, based on a general projection of price levels and relationships.

6. Consulting on plans and procedures for investigations, on technical problems encountered in the surveys, on review of findings, and on preparation of plans or statements pertaining to research on soil and water management, salinity, and watershed hydrology.

7. Calling attention to soil and water management and economic problems which warrant research by USDA and State college economists.

STATE AGRICULTURAL COLLEGE RESPONSIBILITIES

The four State agricultural colleges (Colorado, New Mexico, Utah, and Wyoming) of the upper Colorado River Basin have designated D. Wynne Thorne of the Utah State Agricultural College to represent them on the Field Advisory Committee. He will present their viewpoint in committee deliberations and will keep their concerned officials informed of committee and field party developments. He will not, however, be authorized to commit the colleges to any course of action.

Representatives of each State agricultural college will be invited to attend those meetings of the Field Advisory Commitee at which projects of concern to their respective States are under particular consideration.

Each State agricultural college will be invited to cooperate in investigations of projects within its own State by:

1. Providing all currently available information pertinent to investigations on each project.
2. Participating in field party investigations or carrying on other investigations pertaining to the development and benefits of projects as means are available.
3. Reviewing data and reports on projects and making such recommendations as may be appropriate.
4. Acting as an educational medium to carry information to rural people in project areas.
5. Making recommendations on research, demonstration and educational programs needed to help assure the successful development and operation of projects.

TIME SCHEDULES

Present plans of the Bureau of Reclamation and interested States call for definite project reports to be completed by the Bureau as follows:

Name of project	Bureau of Reclamation report to be submitted	USDA data needed by Bureau of Reclamation
Vernal	January 1957	Nov. 1, 1956
Paonia	May 1957	Dec. 1, 1956
Seedskadee	March 1957 [1]	
Pine River extension	May 1958	
Smith Fork	May 1958	
Florida	May 1958	
Central Utah	June 1959	

[1] Seedskadee report may be postponed and expanded to include LaBarge project if storage reservoir at Fontenelle is found to be feasible.

This schedule will be subject to review and adjustment by the Bureau of Reclamation, the Field Advisory Committee, and the interested States from time to time.

The regional office of the Bureau of Reclamation at Salt Lake City, Utah, is responsible for Bureau activities in the upper Colorado River Basin. E. O. Larson, regional director, and Reid Jerman, regional planning engineer, are the officers directly responsible for planning activities with which this study is concerned. In surveys of specific projects, the field responsibility will be in area offices of the Bureau at Grand Junction, Colo.; Durango, Colo.; Spanish Fork, Utah; and Rock Springs, Wyo.

FUNDS

Funds available for the fiscal year 1957 are as follows:

Fiscal year 1957

Agency:	
Soil Conservation Service	$281,200
Forest Service	40,000
Agricultural Research Service	110,000

REVISIONS

When necessary, revision of this plan of work will be initiated by the Field Advisory Committee.

MEMORANDUM OF UNDERSTANDING BETWEEN THE SOIL CONSERVATION SERVICE, THE FOREST SERVICE, AND THE AGRICULTURAL RESEARCH SERVICE, RELATING TO INTERAGENCY COORDINATION OF PROGRAMS IN WATERSHEDS AS AUTHORIZED BY SECTION 6 OF PUBLIC LAW 566, 83D CONGRESS

The Secretary of Agriculture is authorized under section 6 of Public Law 566, 83d Congress, in cooperation with other Federal agencies and with States and local agencies, to make investigations and surveys of the watersheds of rivers and other waterways as a basis for the development of coordinated programs. Title 9—Administrative Regulations of the Department—assigns general responsibility for administration of this activity to the Soil Conservation Service. It also assigns responsibility for certain phases of the work to the

Forest Service. The Agricultural Research Service and other agencies may also be called upon from time to time to assist.

Purpose.—The purpose of this memorandum of understanding is to establish working procedures to help assure that these investigations and surveys are effectively, efficiently, and economically conducted.

Organization.—At the national level, an advisory committee will be established consisting of representatives of the Soil Conservation Service, Forest Service, and Agricultural Research Service, with the Soil Conservation Service representative as chairman. This committee will help to facilitate participation by Department of Agriculture agencies in river-basin studies and to coordinate such activities with those of other agencies.

Organization of field advisory committees.—When a river-basin study is undertaken, a field advisory committee will be created consisting of representatives of the Soil Conservation Service, Forest Service, and the Agricultural Research Service, with the Soil Conservation Service representative as chairman. The field committee members will maintain appropriate liaison with the administratively responsible officers of their respective services and facilitate the coordination of activities by their respective services in carrying out the investigations and surveys. The field committee will meet from time to time on the call of the chairman and shall meet often enough to accomplish effective coordination of the work and to keep a constant check on progress. The committee will maintain sufficient liaison with field offices of other Department agencies and other departments to provide assurance that the field work of the Department of Agriculture is adequately coordinated with that being done by other departments.

Plan of work.—For each river-basin investigation and survey a plan of work will be developed in the field and submitted to the Washington office of the Soil Conservation Service. Each plan of work so submitted will be referred to the advisory committee at the national level for consideration prior to the plan being placed in effect.

It will include information on (1) the agencies and the projects and programs involved in the particular investigation and survey, (2) the objectives of the investigation and survey, (3) procedures to be followed, (4) duration of the investigation and survey, (5) assignments to each agency and office, (6) reports to be prepared and furnished the cooperating department and others, (7) allotment of funds to each agency, and (8) the names of the members of the field advisory committee for the study.

Progress reports.—In order that all agencies may be kept properly informed of the progress of the work, the chairman of the field advisory committee will arrange with Service representatives for progress reports to be prepared. These shall be prepared in accordance with the schedule of activities outlined in the work plan and will be brief and concise and will be distributed to all interested parties in each Service.

Issuance of reports.—Reports will be issued as agreed upon after approval by all cooperating services through established channels. Unevaluated material may be transmitted to other agencies as agreed upon by the cooperating service representatives. Such reports and material shall be transmitted by the chairman of the field advisory committee or the chairman of the advisory committee in Washington or in accordance with other arrangements provided in the work plan.

Duration.—This memorandum of understanding shall become effective as of the date of approval and shall continue in effect until modified by mutual agreement or until terminated at any time by mutual agreement of the parties hereto.

Date: January 18, 1956:

GLADWIN YOUNG,
Acting Administrator, Soil Conservation Service.

Date: January 24, 1956:

R. E. MCARDLE,
Chief, Forest Service.

Date: February 2, 1956:

B. T. SHAW,
Administrator, Agricultural Research Service.

VERNAL AND PAONIA PROJECTS

Chairman HAYDEN. Mr. Dexheimer, will you please submit for the record detailed statements on the Vernal unit project and the Paonia project?

Mr. DEXHEIMER. Yes, I will do that on the Paonia and the Vernal projects.

(The information requested follows:)

CENTRAL UTAH PROJECT

VERNAL UNIT

Plan

The Central Utah project is a multipurpose project in north-central Utah which will provide water for some 167,000 acres of land and develop 61,000 kilowatts of power. The Vernal unit, the initial phase of this project, is located in the Uinta Basin near Vernal, Utah. The unit will provide supplemental irrigation water for 14,781 acres of land and 1,500 acre-feet of water annually to supplement the municipal supplies of Vernal, Naples, and Maeser. The unit will also provide benefits to fish and wildlife and recreation. Excess flows of Ashley Creek will be diverted at the Fort Thornburgh diversion dam into the Stanaker feder canal and conveyed to the Stanaker Reservoir. Water stored in the reservoir will be released into the Stanaker srvice canal and delivered to existing irrigation canals and ditches. Land drains will be provided as needed and some sections of existing canals will be lined to prevent seepage.

Construction costs: $6,874,000.

Benefits and allocations

	Benefits	Allocations
Irrigation	$253,500	$6,154,000
Municipal water	23,800	[1] 619,000
Recreation	14,200	92,000
Fish and Wildlife	13,600	27,000
Total	305,100	6,892,000

[1] Includes $18,000 interest during construction.

Repayment

Irrigators	$1,500,000
Revenues in basin fund	4,654,000
Total	6,154,000
Benefit-cost ratio	1.44 to 1.00

Repayment organization

The Uintah Water Conservancy District has been organized in accordance with Utah State law and will contract with the United States for the repayment of irrigation and municipal water costs.

Status.—The Central Utah project was authorized as a participating project of the Colorado River storage project and participating projects by the act of April 11, 1956. Since that time detailed preconstruction studies have been underway in preparation for start of construction. A definite plan report for the Vernal unit has now been completed and construction of that unit could be initiated without undue delay when funds for that purpose are made available.

Justification.—Agriculturally, Ashley Valley in which the Vernal unit is located has been an area of limited opportunity, of depressed incomes, and relatively low standards of living. The unfavorable economic condition of the farm people is indicated by the type and condition of farm dwellings and other buildings, by the farm and home conveniences, and by the kind of rural roads and other public services, all of which are below the average for the State of Utah. Most of the young people have been forced to migrate outside the area to find livelihoods. In recent years some economic stimulation has resulted from mineral

resource developments, particularly in the fields of petroleum and gilsonite, but the fundamental farm situation is largely unimproved.

The greatest need of the farmers is for additional irrigation water after high springtime flows recede. Ashley Creek is characterized by high discharges from snowmelts in May or June followed by rapidly receding flows which are far below the requirements for irrigation. The limited reservoir storage capacity now available is far from adequate in meeting the storage needs of the irrigators. Late-season water is urgently needed to bring crops to full maturity, and to permit additional forage crops required to supplement and stabilize the livestock industry.

PAONIA PROJECT, COLORADO

Plan

The Paonia project as originally authorized under the act of June 25, 1947, consisted of a storage dam, enlargement and extension of the Fire Mountain Canal, and reconstruction and enlargement of the Overland Ditch. Only the Fire Mountain Canal work was accomplished under that authorization. Continuing studies resulted in selection of a different storage site and inclusion of the development as a participating project in the Colorado River storage project and participating projects. The project as now contemplated will provide a water supply for 15,300 acres of land, of which all but 2,200 are now irrigated but suffer from severe shortages.

Total project cost: $7,813,000.

Benefits and allocations

	Benefits	Allocations
Irrigation	$639,900	$7,684,400
Flood control	2,000	72,000
Recreation	2,800	7,500
Fish and wildlife	4,200	0
Total	648,900	[1] 7,763,900

[1] Does not include $49,100 of nonreimbursable CRD funds, already expended.

Repayment

Irrigation:	
Irrigators	$2,320,000
Basin fund	5,364,400
Total	7,684,400
Benefit-cost ratio	2.73 to 1.00

Status.—The construction of this project as a participating project in the plan of the Colorado River storage project was authorized by the act of April 11, 1956. Since that time detailed preconstruction studies have been underway and the definite plan report has now been completed. Construction of the project could be initiated without undue delay if funds for that purpose were available.

Justification.—Early settlers of the area found irrigation to be essential for successful farming. Diversion facilities were rapidly developed and by the turn of the century practically all of the late season natural flow of the river and its tributaries had been appropriated for irrigation and domestic use. To permit further development of irrigation, settlers of this area constructed reservoirs on high tributary streams and appropriated flood flows and winter runoff for storage purposes. The reservoirs, however, were difficult to develop and are of relatively small capacity. In continued attempts to irrigate more lands, new ditches were constructed and existing ditches were extended. As a result the irrigation systems became overexpanded and severe late season shortages are experienced on irrigated lands served under junior water rights. A supplemental water supply is needed as soon as possible for late season use to mature the crops.

PRIORITY LIST

Chairman HAYDEN. Section 2 of the authorizing act established a priority list of 24 projects for investigation. I understand that funds

for these investigations are provided in the regular general investigations appropriation. Am I correct?

Mr. DEXHEIMER. Mr. Tomlinson, do you want to answer that?

Mr. TOMLINSON. Yes. However, those participating projects which are listed in the authorized group are included under "advance planning in the Colorado River storage project" item.

Chairman HAYDEN. Will you submit for the record a list of those section 2 projects and the amount that is included for each in the budget estimate?

Mr. TOMLINSON. Yes, sir.

(The information requested follows:)

GENERAL INVESTIGATIONS

Participating projects listed in sec. 2 of Public Law 485, 84th Congress, as priority investigations which are included in the fiscal year 1958 program

	Fiscal year 1958 program
Animas-La Plata project, Colorado-New Mexico	$33,200
Bostwick Park project, Colorado	56,000
Dolores project, Colorado-Utah	110,000
Fruitland Mesa project, Colorado	33,000
Fruitgrowers Dam project extension, Colorado	4,778
Gooseberry project, Utah	8,000
San Juan Chama project, Colorado-New Mexico	20,000
Savery-Pot Hook project, Colorado-Wyoming	4,689
Sublette project, Wyoming	28,000
West Divide project, Colorado	142,000
Total	439,667

NAVAHO IRRIGATION PROJECT

Chairman HAYDEN. Has there been an understanding with the Department as to which agency will conduct the investigations of the Navaho irrigation project?

Mr. DEXHEIMER. Yes, as I mentioned earlier, the Bureau of Indian Affairs is taking care of the investigations of the irrigation features. The Bureau of Reclamation informally has agreed it would construct the irrigation features when they are ready for construction.

Chairman HAYDEN. The city of Yuma's only source of municipal water is the Colorado River which is delivered to consumers through the facilities of the Arizona Water Co. This company, and its predecessors, established water rights in 1893—long before the construction of any Federal facilities on the Colorado River.

Through the operations of facilities under the jurisdiction of the Bureau of Reclamation, especially the Imperial Dam, large deposits of silt have accumulated around the intakes of the city's water supply. These silt deposits have diverted the flow of available water to the opposite side of the channel and are impairing the diversion of water to serve the city of Yuma.

LEGISLATIVE COMMITTEE RESOLUTION

This matter was the subject of a hearing before the Committee on Interior and Insular Affairs of the Senate on April 25, 1957. After that hearing, the committee adopted a resolution stating that it was the

opinion of the committee that the Secretary of the Interior has responsibiliy under the act of June 28, 1946—the Colorado River Front and Levee System Act of 1946—to provide remedial facilities to permit the diversion of the Yuma municipal water supply under rights established in 1893.

A copy of the resolution and the chairman's letter to me pertaining to the resolution will be included in the record at this time.

(The letter and resolution follow:)

UNITED STATES SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
May 2, 1957

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations,
United States Senate.

DEAR SENATOR HAYDEN: Enclosed is a copy of a resolution relating to the water supply for the city of Yuma, Ariz., adopted by the Committee on Interior and Insular Affairs at its meeting on April 30. You will recall that this resolution was considered at a conference held by the committee on Thursday, April 25, 1957.

The Subcommittee on Irrigation and Reclamation recommended the resolution at a meeting on April 29.

As stated in the resolution, the committee interprets the Colorado River Front and Levee System Act of 1946 to place responsibility on the Secretary of the Interior for the maintenance, improvement, and rectification of the channel of the Colorado River, not only in connection with the Yuma water-supply system, but elsewhere on that stream. The precedent cited at the conference with respect to work done by the Department of the Interior on the Palo Verde weir and the continued work at Needles, with respect to channel maintenance, fortifies the committee's position. Of course, the Secretary must have funds appropriated or allocated for this purpose and the Committee on Interior and Insular Affairs so recommends.

Sincerely,

JAMES E. MURRAY, *Chairman.*

RESOLUTION

Whereas the agency serving the city of Yuma, Ariz., established valid and legal water rights in 1893 and has diverted the city's entire water supply for domestic, municipal, and fire-protection purposes from the Colorado River under those rights at the same point of diversion; and

Whereas operations of the United States on the Colorado River, and particularly its operation of the desilting works at Imperial Dam just above the water intakes for the city of Yuma, are impairing and critically affecting the diversion for the city of Yuma's system and thereby creating an emergency, which may threaten the Federal Government's investment of $75 million or more in the Yuma Air Base, as well as the health and well-being of the civilian population of the area; and

Whereas the purpose and intent of the Colorado River Front and Levee System Act of June 28, 1946 (60 Stat. 338), was to vest authority and responsibility in the Secretary of the Interior to maintain the river channel and protect authorized diverters on the Colorado River, similar to the function of the Corps of Engineers on other streams of the country; and

Whereas the Secretary of the Interior, under the authority of said act, has performed similar work on other reaches of the Colorado River such as at Palo Verde and Needles, Calif.: Now, therefore, be it

Resolved, That it is the opinion of the Committee on Interior and Insular Affairs after a review of the law and reports on the problem, that the Secretary of the Interior has responsibility under the act of June 28, 1946, to provide remedial facilities to permit the diversion of the Yuma municipal water supply under rights established in 1893; and that the Secretary be urged to construct without delay required facilities when funds are provided; and be it further

Resolved, That the committee, based on the aforesaid review, recommends that the Committee on Appropriations include an allocation of funds in an amount not less than $200,000 in the public works appropriation bill for fiscal year 1958 (or any deficiency appropriation bill available) as authorized by the

above-mentioned act of June 28, 1946, for the prompt construction as well as operation and maintenance of facilities which will improve and rectify the present condition of the Colorado River Channel at the water intake point for the city of Yuma's water system.

PRECEDENTS FOR DOING WORK

I think there have been established two precedents for the Government doing this work. The Palo Verde Irrigation District has one of the oldest established water rights on the Colorado River. As the result of the construction of dams on the river, the bed of the river was lowered, thereby lowering the water level below their point of diversion. To correct this a rock weir, known as the Palo Verde weir, was constructed, and maintained for a number of years. I understand that the construction of the facilities of the Palo Verde irrigation project will make it possible to do away with this weir.

The other precedent that is well established is the dredging of the river in the vicinity of Needles, Calif. This is a continuing proposition and needs no discussion before this committee.

I wish you would give this matter your immediate attention. It has to be corrected.

I understand some gentlemen representing the city of Yuma are to be here, and I wonder if we could arrange a conference with you, because later they propose to testify before this committee.

When would it be convenient for you to talk to these gentlemen?

Mr. DEXHEIMER. Whenever the chairman is ready, sir.

Chairman HAYDEN. Could you do it this afternoon?

Mr. DEXHEIMER. Yes, sir.

Chairman HAYDEN. Very well.

The committee stands in recess until 10 o'clock Friday morning.

(Whereupon, at 11:40 a. m., Tuesday, June 18, 1957, the subcommittee recessed, to reconvene at 10 a. m. on Friday, June 21, 1957.)

PUBLIC WORKS APPROPRIATIONS, 1958

FRIDAY, JUNE 21, 1957

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to call, in room F–82, the Capitol, Hon. Carl Hayden (chairman) presiding.

Present: Chairman Hayden.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

Chairman HAYDEN. The committee will be in order.

STATEMENT OF HON. A. L. MILLER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA

AINSWORTH AND FARWELL PROJECTS

Chairman HAYDEN. Congressman Miller, we will be pleased to hear from you.

Representative MILLER. Thank you very much, Senator.

It is nice of you to give our Nebraska folks time.

Our two Senators will be here and want to be heard.

I am interested in the Ainsworth and Farwell units of the Missouri River Basin project, which were disallowed by the House. It seems that the action of the House committee is based on the fact that both of the units will have help from the power revenues of the Missouri River Basin project.

POWER CONTRIBUTION

Chairman HAYDEN. My distinct recollection is that from the very beginning we contemplated there would be substantial contribution from the development of power.

Representative MILLER. That is right.

There is very little flood control in this and no nonreimbursable funds. Some areas have a lot of nonreimbursable flood control. They do not have it here. This money is all repaid by power revenues or by the irrigators.

I do not know what your wishes are, Senator, but we have a spokesman from Farwell and Ainsworth.

Chairman HAYDEN. If the spokesman shall remain until later, then we shall hear from him.

PREPARED STATEMENT

Representative MILLER. Our Senators are here. May I file a report in place of my statement on both projects?

Chairman HAYDEN. Yes. It may be filed for the record.
(The statement referred to follows:)

STATEMENT OF REPRESENTATIVE A. L. MILLER ON AINSWORTH IRRIGATION PROJECT

Mr. Chairman, I appreciate the opportunity you have given to me and the folks representing Nebraska in order that we may present to you the merits of two irrigation units in Nebraska. The first unit, Ainsworth, is located in the north central part of Nebraska within the basin of the Niobrara River which is an important tributary of the Missouri River and is designed to irrigate 33,960 acres of fertile land bringing to this semiarid region a prosperous and abundant agricultural economy. With this project in operation the recurrent drought-inducing crop failure will be eliminated. Business in surrounding towns will be enhanced and stabilized and there will be extensive beneficial effects realized throughout the Nation's economy.

The drought condition in Nebraska has been severe since 1952. It has caused hardships to the farmers and businessmen of the towns and cities. The sagging economic conditions of the entire State of Nebraska has been compounded by drought and an adverse agricultural price situation.

The Ainsworth unit's feasibility and desirability of construction was explored thoroughly as recently as 1956 and a detailed report submitted to the Congress. Congress passed the act authorizing this unit. It became law, May 18, 1956. This was really a reauthorization of the construction of the Ainsworth unit on a somewhat modified plan and is an integral part of the Missouri River Basin project under which it was authorized in 1944.

The water users have entered into a contract for repayment under reclamation law. The Interior Department has approved the repayment contracts. The Bureau of the Budget and the administration had the item in the budget for 1958. The people of the district have met all the requests asked of them and are now hoping to get a small appropriation to start construction.

The House committee did not see fit to include the item and give as part of their reason:

"Repayment from the land is only about 30 percent leaving 70 percent of the total repayment allocation to be made up from the Missouri River Basin power revenues."

I would want to point out to this committee that there are 13 irrigation projects in the Missouri River Basin and the average return on these projects is 17 percent from the irrigators. The balance is either fish and wildlife, flood control or power revenue from the Missouri River Basin projects. There is very little flood control which is nonreimbursable, in this project.

The committee in the House indicated in its testimony on page 14 that:

"During the course of the hearings, a number of Bureau witnesses demonstrated an apparent lack of preparedness and an inexcusable unwillingness to provide factual and responsive answers to questions of the committee members. The committee expects and is entitled to prompt, comprehensive and responsive answers. It does not expect to be put through the process of digging out faces piece by piece in a time-wasting and unnecessary process."

I can only conclude, Mr. Chairman, that the reason the House committee did not include the item for Ainsworth was due to the lack of information given them by the Bureau officials. I am hopeful that they make a better impression on your subcommittee members. The report of the Bureau of Reclamation indicates that the Ainsworth project has a benefit-cost-ratio of 2.16 to 1 which is far better than the other projects in the Missouri River Basin.

The water users have done all that Congress has asked them to do and what they would reasonably expect. They have contracted to repay construction costs up to the maximum of their ability to pay. I consider this project and the moneys made available to construct it to be an investment in a growing, dynamic America. The money will be repaid over a 50-year period and that allocated to power will be repaid with interest. I beseech the committee to give this project favorable consideration.

STATEMENT OF REPRESENTATIVE A. L. MILLER ON FARWELL IRRIGATION UNIT

Mr. Chairman and members of the committee, I appreciate the opportunity you have given me to appear before you in support of appropriations to start the Farwell unit which is a part of the Missouri River Basin project in Nebraska. The

site of this project is on the Middle Loup River in Sherman and Howard Counties in central Nebraska. This river has a uniform flow and there is ample water to irrigate the 52,530 acres of fertile land under this project.

Farming in this area is normally hazardous because it is located in the twilight zone of a semiarid part of the United States. The last 5 years has seen a number of major drouths in this area. It has nearly bankrupt the farmers and the businessmen. The proposed area for irrigation is a settled community, settled very early by substantial farmers. Irrigation in this area can be the savior for the drought-wracked farmers, giving them insurance of security through the production of crops.

The feeds grown on these irrigated farms will be largely utilized for the production of livestock. It is estimated that about 9,000 acres of wheat will be taken out of production and replaced by several types of forage crops.

I hardly need to say to your group that the immediate commencement of construction on this project would have a bolstering effect on an economy which has had extreme setbacks in the last few years. Local people need employment. Local businesses need the business. To the farmers it is essential.

The Farwell unit was authorized by the Congress in 1956. The irrigators have completed a repayment contract. The project was recommended by the Interior Department and the Bureau of the Budget. This project is tied in with the Sargent Irrigation District which is nearing completion. The 2 units together will irrigate an area of 68,700 acres.

The Public Works Committee in the House did not authorize the project and gave as one of their reasons that "the revenues of the Missouri River Basin projects are expected to carry more than 60 percent of the repayment costs applicable to irrigation."

I point out, Mr. Chairman, that there are 13 irrigation projects in the States making up the Missouri River Basin area. The average repayment of these irrigation projects is about 17 percent. According to the Bureau of Reclamation, the benefit-cost ratio on the Farwell unit is 1.66 to 1 over a 50-year period. This project is among the best in the Missouri River Basin plan.

The folks living in this area are in full accord with the irrigation project. There is no dissension. They have even formed a conservancy district in which the people in the towns agree to help carry some of the burden of the irrigation development. These people have met all of the requirements presented on the project by the Legislative Committee, the Interior Department, and the Bureau of the Budget.

Mr. Chairman, there is a delegation here from the Farwell District who will want to be heard. I am sure our two Senators will present a solid front asking that the request of the Bureau of the Budget be honored and funds in the amount of $750,000 be made available as a start on this construction.

Chairman HAYDEN. Senator Curtis, we will be very pleased to hear from you.

STATEMENT OF HON. CARL T. CURTIS, A UNITED STATES SENATOR FROM THE STATE OF NEBRASKA

FARWELL AND AINSWORTH PROJECTS

Chairman HAYDEN. Senator Curtis.

Senator CURTIS. The senior Senator is also here.

Senator HRUSKA. I would like to yield to the junior Senator, Mr. Chairman, and I will follow him.

Senator CURTIS. Mr. Chairman:

My remarks this morning will be brief, in consideration of your committee's burdens, and will be for the purpose of bringing before your committee constituents of Dr. Miller, Dr. Hruska and myself, who are fully capable of discussing important facts to be studied in conjunction with requests for funds for the Farwell and Ainsworth irrigation projects in Nebraska.

As your committee knows, the House Appropriations Committee denied funds requested for these approved projects. The House

committee's denial was based upon the portion of repayment of construction costs to be charged to Missouri Basin power and upon a supposedly disproportionate benefit-cost ratio.

I will leave the detailed discussion of these two projects to witnesses appearing today who can qualify as experts. But I want, briefly, to point up some important factors. It is estimated that the Farwell and Sargent units will, during the initial contract period, pay a return of 31.3 of the irrigation allocation.

In the case of Ainsworth, like repayment in the contract period will be 29 percent of the cost allocable to irrigation. Both of these percentages are substantially above the average return of 17 percent estimated for the Missouri River Basin project as a whole.

In addition, the benefit-cost ratio of these units exceeds like ratios for several units authorized under the Missouri River Basin program. Therefore, I urge this committee's careful consideration of testimony which will today be offered by representatives of the Farwell and Ainsworth projects.

Now, Mr. Chairman, I have this much, a half-page here, that I would like to give at this time and ask unanimous consent that it appear at the appropriate point in the hearings in connection with the Republican River Basin which is also part of the Missouri River Basin.

Chairman HAYDEN. That will be done.

Senator CURTIS. Mr. Chairman, it is gratifying that the House approved $3,327,500 for continuation of construction on the Frenchman-Cambridge project during the 1958 fiscal year.

ALMENA AND RED WILLOW PROJECTS

I note that my colleagues, Representative Smith of Kansas and Representative Phil Weaver, of Nebraska, are urging the allocation of modest sums with which to undertake construction of Almena and Red Willow projects in the Republican Basin. Just last week, spring floods again swept through wide areas in that watershed.

Residents of the area have patiently waited for protection from repeated floods, and for the development of irrigation. Actually, the Red Willow, for instance, is a part of the Frenchman-Cambridge project, and the Federal Government has a contractual obligation to the landowners in that area to complete that program without delay.

Let me express my sincere gratitude for the long-time interest your committee has taken in the development of the Republican Basin.

Chairman HAYDEN. We thank you for your statement.

My good friend Senator Barrett is in a hurry. He would like to make a brief statement.

STATEMENT OF HON. FRANK A. BARRETT, A UNITED STATES SENATOR FROM THE STATE OF WYOMING

GLEN CANYON PROJECT

Senator BARRETT. Thank you very much, Mr. Chairman. I will be very brief and ask consent that my remarks follow the testimony by the Nebraska delegation.

Mr. Chairman, I am here to speak briefly on the upper Colorado River project. First of all let me say that I hope this committee will

increase the funds for the Glen Canyon project. That is the main project under construction in the upper Colorado River Basin at the present time, and it is necessary for it to be completed before we can put the whole upper basin into operation.

I believe that they could use $25 million if it were available to them. I believe it would be just good business if we could complete Glen Canyon Dam so that we could get the income on that project started.

FLAMING GORGE

Secondly, I hope that the committee will see fit to at least give us the full amount of that which was requested for Flaming Gorge—$4.8 million. I am sure that the Bureau of Reclamation intends to start the construction work on the dam next spring, and I believe that they have made ample justification for that amount.

Now, the main purpose for wanting to appear before the committee this morning is to express concern over the Seedskadee project, which is in my State. It covers 60,000 acres, and is rated as probably the best project in the whole basin. I am very disturbed that the work is not going along as fast as I had hoped on that project.

I am advised that the Bureau expects to complete all its plans and have the report in and be ready to start construction by the end of the next fiscal year. I am also advised that some preliminary work could be done before the project is put into a full construction stage.

For instance, camp sites could be started and access roads constructed, and many other preliminary improvements undertaken. I believe the Bureau is in a position to estimate those funds.

SEEDSKADEE PROJECT

Now, the difficulty we find ourselves in insofar as the House is concerned, Mr. Chairman, is the fact that the only new project we had in the whole State was the Shoshone extensions and a request came up for $500,000 for this project. Unfortunately, however, the local people ran into considerable difficulties over the water for that extension and the House eliminated the $500,000 for the only new project we had in the State. So I am hoping, Mr. Chairman, that this committee can transfer some of that $500,000—as much as $300,000, anyway—to the Seedskadee project. With the additional funds we could get that project well underway and in shape for appropriations for construction for the 1959 fiscal year.

I appreciate the opportunity to make this statement, Mr. Chairman.

Senator BARRETT. Thank you very much, and thank you, gentlemen. Thank you, Senator Hruska.

STATEMENT OF HON. ROMAN L. HRUSKA, UNITED STATES SENATOR FROM THE STATE OF NEBRASKA

REPUBLICAN RIVER ITEMS

Senator HAYDEN. Senator Hruska.

Senator HRUSKA. Mr. Chairman, at the outset I should like to, subject to the approval of the Chair, associate myself with the remarks made by Senator Curtis on the Republican River items.

ALMENA AND RED RIVER PROJECTS

I understand that Congressman Weaver will address himself to those items in a little bit. But I should like to say that for whatever consideration has been given, we are grateful. We do feel that the Red Willow Dam should have a little more allowance with reference to its planning. And also the item for Almena should be expanded a little in order that that may go forward in a faster pace than is now scheduled.

AINSWORTH AND FARWELL

Now, addressing myself, Mr. Chairman, to the two projects, Ainsworth and Farwell, the figures thereon will be given in detail by others to follow what Congressman Miller has already given. I have gone over these figures in the light of the House report, and frankly I do not feel that the House disallowance was based on very valid information. Perhaps a turndown might be in order, Mr. Chairman, but not for the reasons assigned and unless this committee wants to venture upon new grounds for disallowing the items, I think they should be reinstated.

The repayment contracts as compared or contrasted with the payment capacity, the percentage of the repayment as well as the benefit-cost ratios are very, very outstanding, I think, for projects of this kind, and it is difficult to envision any projects of this size or any larger size on a relative basis which would stand up in a better light.

So I do trust that the committee will very seriously consider the vital statistics which will be submitted here by the witnesses who will follow, as well as those which have already been submitted.

I want to thank you, Mr. Chairman, very much for this opportunity.

STATEMENT OF HON. PHIL WEAVER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA

AINSWORTH AND FARWELL PROJECTS

Chairman HAYDEN. Mr. Weaver.

Representative WEAVER. Thank you, Mr. Chairman.

Mr. Chairman, I have two statements here which I would like to file for the record, one pertaining to the projects in the Republican River Valley in Nebraska, which are in the First District, which Senator Curtis and Senator Hruska have endorsed.

In addition, I would like to file a statement in full support of the Ainsworth and Farwell irrigation units, which programs they likewise have endorsed, which are outside of my district but very important that they be done.

Chairman HAYDEN. That will be done.

(The statements referred to follow:)

Mr. Chairman and gentlemen of the committee, thank you for the privilege of appearing briefly before you in behalf of a deserving irrigation and flood-control program located in the First Legislative District of Nebraska. I refer to the development of the Republican River in the Missouri River Basin, which was authorized in the 1944 Flood Control Act.

I would like to defend vigorously two projects which were approved by the Bureau of the Budget and are included in H. R. 8090. They are the Bostwick

division, Nebraska-Kansas, in the amount of $1,471,000, and the Frenchman-Cambridge division, Nebraska, in the amount of $3,260,000. I believe, also, that it would prove economy in the long run if your committee saw fit to support construction of two additional projects not included in the bill. They are the Red Willow Dam project on the Red Willow River, and the Almena project on the Prairie Dog River, which flows from Kansas into southern Nebraska. Detailed investigations of these last two projects were not finished in time to have the attention of the Bureau of the Budget when it issued recommendations regarding the forthcoming fiscal year.

I appreciate fully the difficult situation which your committee faces this year, growing out of the widespread demand for economy. But I hope to be able to present a persuasive argument, showing that it would be false economy to not undertake these projects. We must differentiate clearly, in our search for economy, between reducing our current operating expenses and our capital expenditures. Funds for economically sound projects in the development of our water resources are clearly a capital investment in the future of America which in the years ahead will return their cost many times.

Surely it would not be consistent, or fair, to roll back appropriations for reclamation projects in this country if Congress is to continue to underwrite irrigation projects abroad. These latter projects bring no return to the United States Treasury whatsoever. Just a few days ago my colleague, Dr. A. L. Miller, of Nebraska, former chairman of the House Interior Committee, an expert on these matters and in whose district the great Platte Valley is located, cited some amazing figures. His data came from the International Cooperation Administration, Office of Statistics and Reports, dated April 24, 1957. It revealed that the United States, as a contribution to international good will, has spent $335.8 million on 197 irrigation and power projects in 46 countries located largely on the continents of Asia, Africa, and Europe. The American people, from whose pockets the money comes for such an undertaking, find it difficult to understand why their tax dollars are spent away from home to conserve land and water resources while they are compelled to submit to long delays in undertaking feasible flood-control and irrigation projects in this country. I am confident that your committee will give full weight to these factors, and will not require any undue delay in construction of domestic projects which are approved by the technical agencies of our Government, and which have already been authorized by the Congress.

I was impressed with President Eisenhower's logic when, in his state of the Union message to the Congress, delivered January 10 of this year, he said, "I would like to make special mention of programs for making the best use of water, rapidly becoming our most precious resource, just as it becomes, when neglected, a destroyer of both life and wealth."

Every year that we delay in providing flood control and a stepped-up irrigation program in the Republican watershed perpetuates the perennial flood threat under which the residents of that valley live. And, because agricultural production is minimized, the Federal Treasury loses substantial tax revenues, which will be forthcoming as soon as supplemental irrigation is made available to additional tens of thousands of acres in this fertile area.

Just north of McCook, which lies approximately in the middle of the Republican Basin, is the city of North Platte, Nebr. For more than three decades a reclamation project has been operating in that valley. Irrigated lands there produce 13 times more per acre than adjacent dry-farm and grazing lands. Since 1908, farm crops valued at approximately $454 million have been produced in the North Platte area, accounting for approximately 80 percent of all the crop receipts in that valley. Each year the Federal Treasury derives $11 million more in taxes than would be derived from dryland farming techniques. Without doubt, the same economic pattern is present throughout the Republican Basin, and the United States Treasury will profit, along with our people, when these multiple-purpose projects are constructed.

H. R. 8090 provides for $3,260,000 to carry on the construction of the Frenchman-Cambridge project. It would be tragic if this minimum sum were not made available. Every stretchout, or delay in construction, actually increases the cost of these projects. And if any major reduction should ever be made, the work forces of the Bureau of Reclamation would be disbanded and serious dislocations would occur. The Congress has actually authorized this project, and the water users on 42,400 irrigable acres have entered into a contract with the Federal Government. It would be most distressing if, for want of modest annual funds, the government should violate its pledge to the landowners and water users in that area. The Bureau of Reclamation has already set forth the precise work

program which it has in mind in fiscal 1958, and it is ready to go. The amount of $1,471,000, which was approved by the Bureau of the Budget and included in H. R. 8090 for the Bostwick division, is likewise the minimum that should be allowed for this project. This money will permit orderly progress and continuation on the construction of this vital project.

The Bureau of the Budget recommended $3 million in investigational funds for the Missouri River Basin. This was reduced to $2 million in H. R. 8090 as passed by the House. A minimum of $20,000 of this money is expected to be available for detailed studies in the upper Republican during the coming year, if Congress should appropriate this sum. Here again, I think that this is the barest minimum that should be considered. Any unnecessary delays in undertaking these investigations merely prolong the time when we can defend ourselves against these disastrous floods, and, once and for all, begin to step up productivity of that valley. I hope earnestly that each of these recommendations, coming from the Bureau of the Budget, may have the approval of your committee. I would like to request an initial sum with which construction can be undertaken on the Almena project. Authorized in the Flood Control Act of 1944, Congress has a moral obligation to launch construction on this project at the earliest possible date. Congress long since passed a tri-State compact, under which our States of Colorado, Kansas, and Nebraska effected an equitable division of the water in the Republican. So I think the people in that area have a right to expect the earliest possible construction of multiple-purpose dams and reservoirs; not only the Almena project on the Prairie Dog Creek, but similar projects on Beaver and Sappa Creeks. These latter could be built either along the northern boundary of Kansas or along the southern boundary of Nebraska. I hope that the committee will view favorably an allocation of funds for Almena, based on a finding of feasibility, by the Bureau of Reclamation.

Finally, I want to appeal earnestly for initial funds with which to undertake construction of a dam and reservoir on Red Willow Creek. No economy advocate in the country today could argue that this construction should be delayed. This structure is a part of the Frenchman-Cambridge project, embracing 42,400 acres. Landowners and water users in the Frenchman-Cambridge Irrigation District have entered into a contract with the Federal Government, as I said before.

They are liable for any infraction on their part of the terms of this contract. Similarly, the Federal Government is responsible for completing construction of all units in the program, or else, theoretically, should be liable for damages.

It is extremely unfortunate that Red Willow was not undertaken earlier. Actually, the Flood Control Act of 1944 authorized construction of this project by the Corps of Engineers. But as you may recall, the Bureau of Reclamation and the Corps of Engineers last year agreed to exchange the Red Willow and Wilson Dam projects in Kansas. So, it is now ordained that the Bureau shall build Red Willow. The Corps of Engineers has determined that annual flood benefits of $168,000 shall be assigned to the project.

When built, the Red Willow Dam and Reservoir would hold back the spring floods, and throughout the summer and fall months, would provide supplemental irrigation for 7,650 acres of land. These lands have already been classified in detail, and are known to be of a quality suitable for irrigation.

This entire Red Willow project is estimated to cost only $6.6 million. A frequent flood offender, its spring runoff is a constant threat to the main body of the Frenchman-Cambridge Irrigation District, whose lands lie directly in its path. It would be nothing short of tragic if the crops on the bulk of these 42,400 irrigable acres should be flooded out by high water in Red Willow Creek. We must not wait until this happens before we start providing corrective facilities.

Several years ago one high-water period along the Prarie Dog accounted for property losses totaling $2,282,285. This was all in the vicinity of Norton, Kans. Eight times since 1944, this stream has reached flood stage.

Then, last June 17, more than 400 persons had to be evacuated from their homes, in the vicinity of Wauneta, Nebr., when Frenchman Creek left its banks

There is no telling where these flash floods will occur, but the network of dams and reservoirs authorized by the Congress in 1944 will provide permanent protection against this recurring threat.

So, gentlemen, it is our earnest hope that, consistent with the public interest, your committee will view favorably the fastest practical construction schedule. And we in that area, mindful of your longstanding interest in our welfare, will do everything we can to deserve your continued confidence.

STATEMENT OF REPRESENTATIVE PHIL WEAVER

Mr. Chairman and gentlemen of the committee, there are a number of projects in H. R. 8090, a bill making appropriations for civil functions administered by the Department of the Army and certain agencies of the Department of the Interior for fiscal year 1958, in which the people of Nebraska are vitally interested. Among these are the Ainsworth and Farwell irrigation projects. As you are well aware, agriculture is the economic lifeblood of Nebraska, and of the entire Midwest. During the past few years, this area has experienced extreme drought—the hard work of the individual small farmers availed nothing without the necessary water to make their crops grow. It has long been my contention that projects such as the Ainsworth and Farwell irrigation units should be carried forward to rapid completion, so that long periods without rainfall will not distress further the economic position of our farm citizens.

The Ainsworth irrigation project was authorized by P. L. 531 of the 84th Congress, and consists of a dam (Merritt Dam) on the Snake River. Repayment contracts have been entered into and approved. Farmers receiving the water have agreed to pay back as much as they can under the provisions of reclamation law, and the people of the district have complied with all legislative requests. The $1,100,000 requested to begin construction of the Ainsworth project was eliminated from H. R. 8090 by the action of the House Committee on Appropriations. Apparently this happened because Bureau of Reclamation witnesses were unprepared to answer some of the questions put to them by members of the committee, and the members' concern with respect to "* * * why more favorable repayment contracts requiring larger repayment on the part of the beneficiaries of irrigation cannot be arranged."

Actually, I have been advised that the Bureau of Reclamation officials have stated that the repayment contracts for the Ainsworth and Farwell projects are among the best in the Missouri River Basin States. The Ainsworth project pays back 30 percent of the cost, while the balance comes from the Missouri River Basin account. As you know, the flood control money in an irrigation project is not paid back, and there is little flood control in the Ainsworth project. The Ainsworth project has a benefit-cost ratio of 2.16 to 1, which is a favorable benefit-cost ratio for these projects in the Missouri River Basin. Telegrams from interested persons in the area are attached hereto for the record.

The Farwell irrgation project in a district consisting of 52,000 acres will tie in with the Sargent Irrigation District, which has already been started and which will, eventually, irrigate 68,700 acres.

There is no hydroelectric development in the Farwell unit. It is the only irrigation project in the Missouri River Basin that has a conservancy district which has been organized and was authorized to assist with the ultimate repayment of the construction of the project. This was included in the budget as a $750,000 item. It was deleted by the action of the House Appropriations Committee. The project has been approved by the Interior Department and the Bureau of the Budget, and has a higher ratio of repayment than the other 13 projects in the Missouri River Basin.

I join with my colleagues in urging that your committee approve these two projects, and I feel that if this action is taken, the House and Senate will concur by amending the bill to include the Ainsworth and Farwell constructions. It seems to me that the investment in the welfare of the people in the communities which will benefit is an investment in the welfare of the citizens of the United States. How much better spent this money, which will add to the self-support and well-being of our citizens, than the $335,800,000 spent on irrigation, hydroelectric and drainage projects in 46 foreign countries; money which came, at least in part, from these very people. Are the projects so urgently needed by our own farmers to be deferred, while we donate fantastic sums to the benefit of other nations at the expense of our own citizens?

Mr. Chairman and gentlemen of the committee, I respectfully urge your favorable consideration of these matters.

AINSWORTH, NEBR., *June 19, 1957.*

PHIL WEAVER,
State House, Washington, D. C.:

We need your help in getting money for the Ainsworth irrigation project.
We trust we can count on you.

OREN JACKMAN.

AINSWORTH, NEBR., *June 19, 1957.*

PHIL WEAVER,
State House, Washington, D. C.:

We sincerely urge you to immediately do everything in your power toward getting the appropriation for the Ainsworth Irrigation District. We need to get this started in the fiscal year of 1958.

KENNEDY EQUIPMENT CO.,
J. M. KENNEDY.
BRUCE KENNEDY.
EVERET COPES.
VELMA COOK.
BUD CRAWFORD.
W. J. THOMAS.
ANDY KRAMMER.

AINSWORTH, NEBR., *June 19, 1957.*

Representative PHIL WEAVER,
House Office Building, Washington, D. C.:

Your support for the Ainsworth Irrigation District is needed. Its benefits are known to all. Attend Friday hearing to support our district.

NATIONAL BANK OF AINSWORTH,
R. S. ROHWER, *Cashier.*

AINSWORTH, NEBR., *June 19, 1957.*

Representative PHIL WEAVER,
House of Representatives, Washington, D. C:

We, the young businessmen, ranchers, and farmers, endorse the Ainsworth irrigation unit 100 percent. We respectively request your support and urge you to do everything to obtain funds for the starting of this unit in the fiscal year 1958. We feel this project definitely establishes the future economy of this area.

AINSWORTH JUNIOR CHAMBER OF COMMERCE.

AINSWORTH, NEBR., *June 19, 1957.*

PHIL WEAVER,
State House, Washington, D. C.

The economy of this area needs irrigation. We expect your help in getting money appropriated for construction in fiscal year 1958.

JEROME BEJOT, JR.,
Director Ainsworth Unit.

AINSWORTH NEBR., *June 19, 1957.*

Congressman PHIL WEAVER,
House of Representatives, Washington, D. C.

Your support urgently needed to acquire funds to start construction on the Ainsworth irrigation unit this year. Investigations have proven this project to be a sound development and essential to the community. Any further delay in construction would be very undesirable.

HOUSE CHEVROLET.
E. A. HOUSE.
CLARENCE JANSEN.
WAYNE SWETT.
LOREAN RITTER.

AINSWORTH, NEBR., *June 19, 1957.*

PHIL WEAVER,
Statehouse, Washington, D. C.:

Request your urgent support in obtaining appropriations for the Ainsworth Irrigation District. Have spent a lot of time on this because as a farmer I believe in it. Please don't let us down.

HENRY S. MILES,
Director, Ainsworth Unit.

AINSWORTH, NEBR., *June 19, 1957.*

Representative PHIL WEAVER,
House of Representatives, Washington, D. C.:

Urgent money be appropriated for Ainsworth irrigation project.

STEWART OSBORN.

AINSWORTH, NEBR., *June 19, 1957.*

PHIL WEAVER,
Statehouse, Washington, D. C.:

Ainsworth irrigation project no new start. Bureau of Reclamation has been working on plans 11 years. Help us get its appropriations.

HENRY HERMSMEYER.

AINSWORTH, NEBR., *June 19, 1957.*

Congressman PHIL WEAVER,
Statehouse, Washington, D. C.:

Ainsworth Chamber of Commerce strongly recommends and urgently requests your help in appearing before Senate Appropriations Committee to obtain necessary money for start of Ainsworth irrigation project during coming fiscal year. This project is vitally needed to bolster the general economy of this area.

AINSWORTH CHAMBER OF COMMERCE.

AINSWORTH, NEBR., *June 19, 1957.*

Congressman PHIL WEAVER,
House Office Building, Washington, D. C.:

We urge you to appear before the Appropriations Committee on Friday to support and do everything you can possibly do for securing necessary funds for the Ainsworth irrigation unit.

AINSWORTH LOAN & FINANCE CO.
RAITT REALTY & INSURANCE CO.
ROY RAITT.
RONALD RAITT.
CHARLES RAITT.
BETTY FERNAU.
IONE BRUVELEIT.

AINSWORTH, NEBR., *June 19, 1957.*

PHIL WEAVER,
Statehouse, Washington, D. C.:

We need your support on money for the Ainsworth irrigation project, Ainsworth Irrigation District.

FREDERICK HERMSMEYER.

AINSWORTH, NEBR., *June 18, 1957.*

Representative PHIL WEAVER,
House of Representatives Office Building, Washington, D. C.

Request your support in obtaining appropriations for Ainsworth, Nebr., irrigation unit to commence construction in fiscal year 1958. Project urgently needed in stabilizing Nebraska's economy.

JAMES W. QUESENBERY,
ELBERT MUDHENK,
Real Estate and Insurance.

Representative WEAVER. Thank you, sir.

Chairman HAYDEN. Is Congressman Smith here?

(No response.)

STATEMENT OF HON. JOHN F. BALDWIN, JR., REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

SOLANO PROJECT IN CALIFORNIA

Chairman HAYDEN. Congressman Baldwin.

Representative BALDWIN. Thank you, Mr. Chairman.

Mr. Chairman, I appreciate the opportunity to testify before this committee, and I am here to testify in favor of the sum in the budget of $3,672,000 for the Solano project in California. That sum is not only in the budget but it has been approved in full by the House.

I might say that the Solano project is nearing completion. The Monticello Dam, the main unit has been completed.

This is for the continued construction of the main canal to have the water ready for the user by the time the dam is full.

Chairman HAYDEN. You did not come over to raise any doubt in our mind. You want us to act as the House did.

Representative BALDWIN. Yes.

LOAN PROGRAM FOR DISTRIBUTION SYSTEMS

If I may, Mr. Chairman, on page 17 of the House report is a paragraph dealing with the loan program for distribution systems. There is a paragraph there that reads as follows:

> There are currently available $14,600,000 of previously appropriated funds for this program, after taking into account the adjustment made by the committee. This amount will provide $12,700,000 required for the Solano contract with $1,900,000 required for the 1958 advance on the Terra Bella project should a contract with the irrigation district come into being during the fiscal year 1958. Language has been included in the bill to provide for annual partial payments on loan contracts not yet approved by the Secretary.

This figure referred to in this paragraph was approved last year.

The Solano Irrigation District is the first district in the country from the standpoint of timing to actually get its application under Public Law 130 all the way through the procedure.

They had an election a month ago and the contract was approved with an overwhelming vote. Now the contract has been signed with the Bureau of Reclamation.

In accordance with the contract they have taken steps now to have it validated by the California courts. Some question was raised a while back that the Ivanhoe decision of the California Supreme Court may affect some contracts in California because the Ivanhoe decision said that a contract containing a 160-acre limitation was invalid under California law.

But the same decision said that any contract already entered into would stand.

Now, the Solano Irrigation District had entered its original overall contract several years ago which had a 160-acre limitation and which has been validated by the California court.

The present contract is just a detailed contract to actually carry out details now. And the California district securities commission approved this contract and we are confident that the California courts will approve this contract on the grounds the overall contract has been already entered into. So we will be in a position to use these full loan funds very shortly, and I would just like to say, Mr.

Chairman, I hope very much the committee here and the Senate can adopt comparable wording to what has been included in the House.

COMPTROLLER GENERAL'S DECISION

It is my understanding that the Bureau of Reclamation has interpreted decision 16, Comptroller General 1007 of May 17, 1937, to mean either that a lump sum has to be available for a contract of this type or it has to be clearly spelled out in the committee report, which is accomplished by the wording here.

So I am simply here to urge that the committee include comparable language to what is included in the House, Mr. Chairman.

Chairman HAYDEN. The angle that I did not know about was that the Supreme Court of California making this decision on a 160-acre limitation said contracts prior to that decision were valid.

Representative BALDWIN. They made a clear statement in their decision that they felt their decision would only apply where contracts had not been entered into. Where contracts were already validated, they thought those contracts would stand unchallenged.

Chairman HAYDEN. We will bear in mind your recommendation.

Representative BALDWIN. Thank you, Mr. Chairman.

Chairman HAYDEN. We will take up the Ainsworth and Farwell units now.

Representative MILLER. Thank you, Mr. Chairman. They have a spokesman.

From the Farwell unit we have Attorney Cyril Shaughnessy, Mr. Peter Badura, Andrew Nelsen, and Rudy M. Manasil.

From the Ainsworth unit project we have Attorney William C. Smith, Roger Thorley, Ben Clark, and Mr. Jesson.

Mr. Karabatsos, are you the spokesman for both or just the Ainsworth project?

Mr. KARABATSOS. Just Ainsworth.

Representative MILLER. Do you want to be heard first and then Mr. Shaughnessy the attorney for Farwell will be heard.

And I see Mr. William Welsh of the Reclamation Bureau in the room.

The CLERK. He will testify later.

MISSOURI RIVER BASIN

STATEMENT OF KIMON T. KARABATSOS, EXECUTIVE SECRETARY, NIOBRARA RIVER BASIN DEVELOPMENT ASSOCIATION, ACCOMPANIED BY WILLIAM C. SMITH, JR., ATTORNEY, AINSWORTH IRRIGATION DISTRICT; BEN CLARK, PRESIDENT, AINSWORTH IRRIGATION DISTRICT; AND ROGER S. THORLEY, PRESIDENT, NIOBRARA RIVER BASIN DEVELOPMENT ASSOCIATION, AINSWORTH, NEBR.

AINSWORTH UNIT

Mr. KARABATSOS. Thank you very much.

The CLERK. Mr. Karabatsos is first on Ainsworth. How much time do you need?

Mr. KARABATSOS. Just a couple of minutes is all. Any questions that you want to ask, Senator, we will be glad to answer.

Mr. Chairman, my name is Kimon T. Karabatsos, and I am executive secretary of the Niobrara River Development Association, and I was formerly administrative assistant to Congressman Miller, and I am speaking today in behalf of Mr. William C. Smith, Jr., who is the attorney for the Ainsworth Irrigation District, as well as the city of Ainsworth, county of Brown, State of Nebraska; Mr. Ben Clark, our president of Ainsworth Irrigation District and an active farmer, is here in the room; and Roger Thorley, president of the Niobrara River Basin Development Association and also president of the Commercial National Bank of Ainsworth.

PREPARED STATEMENT

I have a prepared statement which I would like to submit for the record with three charts, and I will just summarize the comments, Senator.

Also, Mr. Chairman, I have statements from Messrs. Smith, Clark, and Thorley which I would like to file for the record.

Chairman HAYDEN. You may do that.

(The statements referred to follow:)

Mr. Chairman, members of the committee, my name is Kimon T. Karabatsos. While I am not directly employed by the Ainsworth Irrigation District, I did serve for 1 year as the executive secretary of the Niobrara River Development Association of which the Ainsworth Irrigation District is a member. Prior to working for this association, I was administrative assistant to Congressman A. L. Miller and a technical consultant to the National Reclamation Association and the upper Colorado River Basin project.

I have a very keen interest in irrigation and reclamation. In my humble opinion, I sincerely feel that irrigation and reclamation is the best possible insurance policy that our country has to keep itself strong. Show me a country with an empty breadbasket and I will show you a country weak and filled with unrest. According to reliable statistics, I can expect to live another 35 years. During these coming years, our population will increase to more than 250 million; and I hope our standard of living will continue to increase as it has in the past. Without irrigation it cannot be done.

Irrigation is a subject very dear to my heart for I have a lot of faith and confidence in this great land of ours. I have traveled the world around—as a serviceman in two wars and as a civilian. I have yet to find any nation in which the people share the confidence of their own country as the average citizen of the United States.

Today, I am asking for an appropriation for the Ainsworth Irrigation District. The $1.1 million requested in the President's budget to start the project has been given very careful consideration and is not a direct outlay of Federal funds but rather an investment in our country's future.

Unfortunately, the previous testimony presented by Bureau of Reclamation officials on the public-works appropriations bill was incomplete and misleading. Had I not been aware of the facts which lead to the authorization and reauthorization of this project, both economically and physically, by the Congress, I am certain that I would have acted in the same manner as the House Appropriations Committee.

Recognizing the Bureau's testimony as incomplete after reading the hearing, I have delved deeply into the Bureau reports, putting together pertinent facts and figures. For instance, the committee report on the public works appropriations bill for fiscal year 1958 states:

"In the case of this particular project (Ainsworth) the committee fails to understand why more favorable repayment contracts requiring a larger repayment on the part of the beneficiaries of irrigation cannot be arranged. This * * * can be delayed pending an examination of the possibility of an increase in the repayment of the irrigation beneficiaries."

The question arises as to how much the water users should pay. The only criteria which can be used to judge is what are the other water users of the Missouri

River Basin projects paying? Using simple mathematics you will find that the average repayment for the Missouri River Basin is 17 percent of the cost. Water users in the Ainsworth district have committed themselves by contract with the Federal Government to repay 30 percent within a period of 40 years. After that, a new contract may, and undoubtedly will be, drawn covering another 40 years since the life of the project can be easily foreseen to be 100 years. Add this to the amount being repayed would mean a 75 percent repayment by the water users.

Not only are the Ainsworth water users repaying nearly twice that of the average, but the benefit-cost ratio is considerably higher than any other project within the basin. The benefit-cost ratio of the Ainsworth project can be found on page 890 of the House hearings. It states the ratio is 2.16 to 1. The nearest benefit-cost ratio of the other 12 projects within the basin is the Glendo project which is 1.76 to 1.

With the committee's permission I should like to insert a chart I have prepared which shows the percentage of repayment by the water users and the benefit-cost ratio of all of the projects within the Missouri Basin. I might add that these figures are from the Bureau of Reclamation reports.

CHART NO. 1

	Percent payment by water-users	Repayment contract	Benefit-cost	
			Reclamation	Budget
Project:				
Ainsworth	29	8.82	2.16:1	0.69:1
Bostwick	32	8.45	1.5:1	0.09:1
Cedar Bluff	18	[1] 8.28	1.6:1	
Farwell	31	8.10	1.66:1	0.53:1
Frenchman Cambridge	15	7.33	1.3:1	
Glendo	8	[2] 1.90	1.76:1	
Helena Valley	21	5.55	1.5:1	0.50:1
Kirwin	25	8.07	1.02:1	
Owl Creek	29	3.08	0.89:1	
Sargent	32	6.94	1.07:1	
Shoshone	19	[1] 6.10	1.40:1	
Webster	19	8.00	1.15:1	0.74
Yellowtail	0		1.51:1	

[1] Estimate.
[2] Per acre-foot.

NOTE.—The above figures are computed for a 40-year period as provided by reclamation law. After that period the contracts may be renegotiated for another 40 years which would double the repayment percentages.

It doesn't take much, gentlemen, to see that the best investment within the Missouri River Basin will be the Ainsworth project.

Now, what will this mean? What will this project do to the value of the land? What will it add to the gross national product? What will it add in the form of new taxes—Federal, State, county, and local?

Testimony presented to the House committee showed and I quote from the committee report, "* * * indicates that an increase of $53.92 per acre will result through application of irrigation water to the land." The testimony surrounding this figure was very vague and when I first read it, I thought it was a typographical error until I realized they were speaking of both direct and indirect benefits, while the committee was interested in direct benefits only. The figure that the Bureau witnesses should have given was $23.24. I have another chart showing the agricultural values of the unit with and without irrigation. This, in my opinion, shows what the project will do. With the committee's permission, I should like to make this a part of the record.

CHART NO. 2—*Agricultural values with and without irrigation—Ainsworth unit*

	Total project			Per acre		
	With	Without	Difference	With	Without	Difference
Gross farm income	$3,732,800	$922,700	$2,819,100	$109.92	$27.17	$82.75
Production expense	2,630,100	609,200	2,020,900	77.45	17.94	59.51
Net farm income	1,102,700	313,500	789,200	32.47	9.23	23.24
Family living	819,200	313,500	505,700	24.12	9.23	14.89
Payment capacity	283,500		283,500	8.35		8.35
Estimated operation, maintenance and replacement costs						2.30
Estimated repayment						6.05

Benefit-cost ratio	2.16 to 1
Reimbursable irrigation costs	$25,918,200
Estimated repayment by irrigators in 40 years under existing contract	$7,522,500
Percent repayment	29

The 53.92 reported in hearings before the subcommittee as increased annual farm income per acre actually represents the total benefits—the income accruing to the farmer, the merchant, the wholesaler, the manufacturer, and others. The farmer's share of this approximates $23.24, as indicated on line 3 above and must cover operation and maintenance and construction repayments, and family living.

Reclamation's normal procedure is to include all direct and indirect benefits, and design structures, at extra cost, to last at least 100 years. Page 890 of the budget justification, House hearings, shows the ratio of total benefits to total costs as 2.16 to 1.

This chart may be found in the definite plan reports of the Bureau of Reclamation on the Ainsworth project.

An examination of this chart will show that the payment capacity of the water users in the Ainsworth project is $8.35 per acre. Naturally, the question arises as to just what is payment capacity, and how do they arrive at this figure?

The Reclamation Project Act of 1939 directs the Bureau to determine the capacity of the water users to meet irrigation costs and to negotiate contracts within this capacity. What is done, is simply this—you take the gross value of the crop and subtract the three major expenses—(*a*) operating, (*b*) retention, which includes real estate taxes and reasonable interest on borrowed money needed to operate, and (*c*) family living expenses.

Following the above formula the Bureau developed a figure of $8.35 per acre for the Ainsworth water users. How did the district react to this figure? In a most unusual manner. The contract that they signed calls for $8.82 or 47 cents per acre more than the computed payment capacity. Mr. Chairman, members of the committee, these people want the project and they need it desperately. So much, in fact, they are willing to give up some of the living expenses to sustain a farm family at a reasonable standard of living.

I have one more chart, with the committee's permission, that I would like to have placed in the record. This chart, entitled "Agricultural Values With and Without Irrigation—Six Projects," gives all the facts required by the 1939 act and shows the repayment contracts. You will note that the repayment contract for Ainsworth is the only one which is higher than the payment capacity. The Ainsworth district was completely aware of this fact when the contract was signed.

CHART NO. 3.—*Agricultural values with and without irrigation—6 projects*

[Per acre]

	Bostwick division Kansas portion only	Michaud Flats	Webster unit	Helena Valley	Ainsworth project	Farwell unit
Gross farm income:						
With project	102.61	98.49	124.35	61.59	109.92	123.99
Without project	71.48	1.92	46.92	20.40	27.17	41.29
Change	31.13	96.57	77.43	41.19	82.75	82.70
Farm expenses:						
With project	66.51	58.60	85.07	34.46	77.45	95.01
Without project	53.20	1.36	29.33	12.56	17.94	25.93
Change	13.31	57.24	55.74	21.90	59.51	69.08
Net farm income:						
With project	36.10	39.88	39.28	27.13	32.47	28.98
Without project	18.28	.55	17.59	7.83	9.23	15.36
Change	17.82	39.33	21.69	19.30	23.24	13.62
Family living:						
With project	26.84	25.02	30.00	21.28	24.12	20.83
Without project	18.28	.55	17.59	7.83	9.23	15.36
Change	8.56	24.47	12.41	13.45	14.89	5.47
Payment capacity with project	9.26	14.86	9.28	5.75	8.35	8.15
Repayment contracts	8.45	[1] 4.80	8.00	5.55	8.82	8.10

[1] 50-year contract.

NOTE.—Unadjusted.

The facts and figures presented to the committee today, I am completely confident, shows beyond any doubt that the Ainsworth project in feasibility, in gross improvement of the land, in indirect benefits, and in repayment is the best project within the Missouri River Basin. I sincerely hope that this committee will see fit to reinstate the $1.1 million to start work on the Ainsworth project.

AINSWORTH UNIT—MISSOURI RIVER BASIN PROJECT

The Ainsworth unit, located in north central Nebraska within the basin of the Niobrara River, which is an important tributary of the Missouri River, will irrigate 33,960 acres of fertile farmland, bringing to this semiarid region a prosperous and abundant agricultural economy. By means of this project, recurrent drought-induced crop failures will be eliminated, business in the surrounding towns will be enhanced and stabilized, and extensive beneficial effects will be relayed throughout the entire Nation's economy.

Most of Nebraska, and particularly the north central portion where this unit is proposed, has been experiencing a severe drought. Since 1952 precipitation has been only 75 percent of normal. The normal precipitation of 20 inches per year is scarcely sufficient to grow even the short-season, drought-hardy crops. This is a transitional zone of farming where conditions may be especially favorable for cropping for a series of years, encouraging heavy investments in land improvements and livestock. The land responds with bumper crops of grain and hay, reflecting the good care and investment expended upon it. But Nature has a way of reversing the wheel of fortune, and almost as frequently as she mothers a bountiful crop she destroys another with the ravages of drought. So precariously balanced upon the edge of the dependable cropping belt is this north central Nebraska area that to receive or to be denied one summer rainstorm is the difference between a successful crop or a failure.

The drought conditions in this area were of such severity from 1952 until last year that there has been widespread financial distress among the farmers and the businessmen of the towns and cities. The sagging economic conditions of the entire State of Nebraska have been compounded by drought and an adverse agricultural price situation. The State as a whole, and particularly the area directly involved in this proposed unit, cannot, under these adverse circumstances, continue to lend its full share of support to the Nation's economic strength. Throughout our country's history, the expanding frontiers of the West have provided opportunities for employment and investment for our ever-growing population. Our frontiers have almost disappeared now in this day and age and the opportunities which they formerly provided must now be furnished by shoring up the weak spots in our productive capacity; by eliminating as far as possible the hazards to production which waste our efforts and our resources.

But we know what we can do in the semiarid portions of the Middle West to combat the whip these recurrent droughts and to thus keep farmers and businessmen on their feet. The answer has been found in irrigation. By providing just that extra amount of moisture when needed by the crop, a whole chain of good events takes place. The farmer gets his crop, the merchant can collect his bills, the banker his interest, and the Government its taxes. The automobile dealer can place a new order for cars and trucks with the factory in Detroit, the agricultural chemicals dealer can get back on a cash basis with his Delaware supplier; money circulates, goods and services flow and are paid for. Modern-day farming is a highly technical and exceedingly expensive operation. The days of low-input, high-return production passed out when the tractor moved in. Today it costs real money to farm, the biggest expense is in the huge outlay for manufactured goods that the farmer must have. He must have good, efficient specialized machinery; selective herbicides, insecticides, fertilizers; high-test fuels and special-duty lubricants. Thus his purchasing in local channels sets up that chain reaction of economic activity clear back to the factory and the mine and the oil well. By merely having the critical element of agricultural production, irrigation water, the farmer's success can be assured along with that of all those myriads of businessmen and workers who supply him with the factors of production.

The best living proof we have that irrigation actually does these things is the half-century-old North Platte irrigation project in western Nebraska and eastern Wyoming. At the request of the House Interior and Insular Affairs Committee, the Bureau of Reclamation submitted a report on the North Platte irrigation project's growth and contribution to the local economy. This straightforward factual report revealed what everyone who has ever lived in or traveled through that section of the country can attest to—that irrigation has actually made the desert bloom, has become the backbone of a healthy local economy and has enabled a formerly desolate land to shoulder its full share of the burden of national economic strength and security.

Next spring, in 1958, the project will have been furnishing water to thirsting crops for 50 years. Each year, through appreciation of values and through the constructive maintenance practices accorded the project works, the project features become more highly valued and regarded by local farmers and the valley residents. It will still be functioning 50 years from now and 50 years after that. The granite and concrete dams will long continue to harness the once-fretful North Platte River that dominated a feast-and-famine pattern of existence. The settlers had to crowd to the river for its life-giving waters, but when it turned its fury upon them, their farms and towns and crops were destroyed. The project has changed the North Platte from a liability into an asset, the benefits of which are now felt and recognized far and wide.

The Bureau's report on the North Platte project reveals that irrigation caused the project lands to have per-acre market values seven times the value of adjacent nonirrigated lands of similar quality. These values stem directly from the production attained upon them, of course, and reflect the difference in the long-term average cropping results obtained. Each irrigated acre produces as much as 13 dry-farmed acres and the total income generated among all farmers and townspeople in the irrigated area is 40 times as great on a per-acre basis as that on adjacent dry-farmed areas. These things are not mere happenstance—they have materialized out of the vision and boldness of the early project sponsors and builders, out of long days of farmers' toil, out of vast expenditures of private capital for land improvement, buildings, machinery and other production inputs. But the perserverance and investment and hard work pays off year after year—steady, stable, high-level income throughout the entire economic structure of the valley farms and towns.

The Federal investment is a sound one. Every cent of reimbursable project costs will be repaid. Out of the construction cost of $22,482,000, $16,182,000 had already been repaid to the Federal Treasury as of June 30, 1955. The Bureau estimates that since 1940 in excess of $100 million has been paid into the Federal Treasury by valley residents in income taxes, excise taxes and other forms of internal revenue which are directly traceable to the enhanced income and business activity attributable to the North Platte project, acre-for-acre the irrigated lands account for 20 times as much local property tax revenue and 33 times as much Federal tax revenue as nonirrigated lands.

During disastrous drought years of the 1930's when the entire Middle West fought for agricultural and economic survival, the North Platte project, along with others in the West, was able to absorb dried-out families from nonirrigated areas. Its economy continued to produce and expand throughout that critical period when other areas staggered under the drought and depression. The North

Platte project not only offered opportunity to man, but was instrumental in furnishing emergency feed for livestock from the drought-stricken ranching areas. These beneficial effects take place each year to a less spectacular degree. Carload after carload of hay moved out of Nebraska and Wyoming irrigated areas to feed starving cattle in Texas, Oklahoma, and New Mexico last winter.

Largely similar to the North Platte project a few short miles to the southwest, the proposed Ainsworth unit promises to be fully as great an asset to the Nation. Soil, climate, topography, and other natural factors are comparable in the two areas. Their problems of drought are identical—seldom is the average amount of moisture received, almost always too much above or too far below the so-called normal to make for best farming results. Interseasonal droughts, even in years of apparently sufficient precipitation, cause reductions in crop yield and occasionally total failures.

Like the neighboring North Platte project, this potentially rich agricultural area can become a strong contributing force in the economy of the State of Nebraska and likewise to the Nation as a whole. Like the many-faceted eye of an insect, the Nation's business structure is composed of thousands and thousands of more-or-less autonomous spheres of influence, each contributing a small but important part of the whole. The strong, stable local economy of the North Platte Valley is one such important economic sphere. The proposed Ainsworth unit can create another and thus vitalize one more facet of the country's business makeup.

AINSWORTH UNIT

The feasibility and desirability of construction of the Ainsworth unit were explored thoroughly as recently as 1956 when detailed reports were submitted to the Congress. These reports, among other things, dealt with the economics of the unit and proposed water-user repayment of construction costs. The congressional Committees on Interior and Insular Affairs thoroughly explored the proposed plan of development and held hearings thereon before recommending enactment of H. R. 9132 which became the act of May 18, 1956 (70 Stat. 160), and which approved the feasibility report for the Ainsworth unit. Submission and approval of such a report met in full the requirements of the act of August 21, 1954 (68 Stat. 757), reauthorizing the construction of the Ainsworth unit on a somewhat modified plan as an integral part of the Missouri River Basin project.

Acting in good faith the water users, represented by the Ainsworth Irrigation District on September 12, 1956, entered into a water service and repayment contract with the United States providing for repayment substantially in accord with the findings in the congressionally approved feasibility report. The latter report contemplated that depending on the outcome of repayment negotiations annual water charges to the irrigator would absorb between 85 percent and 100 percent of water-user payment capacity which was estimated to be $8.35 per acre. Based on more recent estimates of the long-range future cost of operation, maintenance, and replacement of the unit works and also taking into account the repayment obligation to the United States, it is now estimated that annua .water charges will approximate $8.82 per acre and will utilize in full the estimated capacity of the water users to pay.

Water-user repayment under the contract executed September 12, 1956, is expected to approximate $7,522,500 by the end of the initial 40-year contract period. This approximates 29 percent of the construction cost properly allocable to irrigation. As contemplated in the congressionally approved feasibility report the balance of the irrigation allocation will be returned to the United States from net power revenues of the Missouri River Basin project. Renewal of the water service portion of the present contract with the Ainsworth Irrigation District after completion of the initial 40-year contract period can be used if necessary to increase the amount returned by the irrigators. The 29 percent repayment already under contract is considerably greater than the 17 percent average return from irrigators estimated for the Missouri River Basin project as a whole.

In summary, the construction of the Ainsworth unit will do much to offset dire effects of recurring droughts, and will create a prosperous and stable irrigation economy from which not only the local farm and business people will benefit but the whole Nation will benefit. This is attested to by the exhaustive studies of of the Bureau of Reclamation and thorough congressional consideration of the unit which resulted in the passage of the 1954 and 1956 acts authorizing construction of the unit. The water users have done all that the Congress has asked and could reasonably expect by contracting to repay construction costs up to the maximum of their ability to pay. I therefore urge that the Congress keep faith

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with the Ainsworth people by restoring to the fiscal year 1958 appropriation bill the $1.1 million requested for construction of the Ainsworth unit.

REMARKS OF WILLIAM C. SMITH, JR.

My name is William C. Smith, Jr. I am an attorney with offices at Ainsworth, Nebr. I am now, and, since the organization of the Ainsworth Irrigation District have been, their attorney. I appear here on behalf of that district and on behalf of those interested in irrigation in north-central Nebraska.

The Ainsworth project is a part of the Missouri Basin plan, made explicitly so by Public Law 612 in the 83d Congress, and has been authorized for construction by Public Law 531 in the 84th Congress, after proving its feasibility both economically and physically. This project has been under study for some time and is a part of an overall plan for the Missouri Basin development.

The district has entered into a repayment contract as of September 12, 1956, with the United States Government consistent with the estimates of repayment capacity as recommended by the Bureau of the Budget in their letter to the Department of Interior dated January 26, 1956. We have passed every test required and have been recommended in the Presidential budget for appropriations. We have had the wholehearted support from our Governors, Val Peterson and Robert Crosby, and our present Governor, Victor Anderson, and all have so indicated by statements to the Interior and Insular Affairs Committees in the House and Senate at prior hearings.

Our project would utilize the water from the Snake River originating in Nebraska which now flows unused to the Gulf of Mexico.

The use of this water is desired by the landowners on this project, as they voted overwhelmingly for the organization of the district.

This area has good soil, but lack of rainfall has brought failure after failure in production of crops and, as a result, we have a very unstable economy. Our young people are leaving our community and going to irrigated areas, and we have lost 800 in population between 1940 and 1950 from our farm and ranch area.

We have no industry, but depend on farmers and ranchers for our economy. Our State and local taxes have risen greatly, and we need a more stable economy to meet this burden. The Federal Government would benefit by way of increased revenue from income taxes from this area. It is a recognized fact that irrigated areas have more than paid their cost in increased income-tax revenue.

We are spending more money under the foreign economy program on reclamation and power projects than we are in this country. If we are going to continue foreign aid, it is essential that we increase our incomes in this country in order that we can stand that burden.

America's population has reached a point we expected to reach in 1970. By 1975 it is estimated we will have a population of 200 million. More land is going out of production each year because of urban expansion and our Department of Agriculture says by 1975 we will have to produce 40 percent more crops. It will take 5 to 6 years to build our project and another 8 or 10 years to get it into full production, and that will be 1971, which will be none too soon in the face of our growing needs. We can't wait until that time to come to build projects like these. We must plan ahead.

We have what it takes to do the job, but we are not in a position to do it by ourselves. We need the Federal Government to invest in this project, as it will repay every dollar through our repayment contract and earnings from power on the Missouri River and will give an area that could be declared a drought area a boost.

REMARKS OF BEN CLARK

My name is Ben Clark, of Ainsworth, Nebr. I am president of the Ainsworth Irrigation District and have been ever since its inception. I have lived in the Ainsworth Irrigation District for 50 years and I have been a farmer and rancher all of my life. I own 600 acres of cropland, the major portion of which is in the Ainsworth Irrigation District, 320 acres being irrigable land. I also own 2,600 acres of pasture and hay land located approximately 12 miles south of Ainsworth, Nebr., and usually keep from 500 to 700 head of cattle on the land.

I am very much interested in and desire very much to have conservation, and I believe the people in the Ainsworth Irrigation District want the same. Our

farmlands are fertile and have been farmed from 50 to 70 years. This is a long time to be taking crops off the land and putting nothing back on it. All we need to do to conserve our land is to get water on it, all 34,000 acres of this rich Niobrara Valley land, the place where I believe God intended this water to be used. If we don't get water soon, it will be too late. Our district is bordered on all sides by pasture and hay land. Many of the people who own only pastureland need our alfalfa and legumes that we can raise by irrigating and at the same time conserve their pastures and our rich lands. Conserve our water for us and we can do the rest. We cannot do it alone. We believe in conservation at home first, where we hope our grandchildren will be able to live in a land of plenty rather than leaving their homes and migrating to some more productive area which promises a brighter future. A few more drought years like we have had the last 3 years and you could say they will be leaving nothing more than a dust bowl. It can happen; in fact, it has happened several times. This soil, after 60 or 70 years of cultivation, is as helpless to resist drought and wind erosion as you or I after 60 or 70 years of service are able to stand heavy physical strains.

If you will provide the means for us to get the water, we can save all this rich soil. We are asking you and Congress to give us nothing. The only thing we are asking you to give us is the opportunity to work hard and spend a lot of our own money to develop this wonderful project. However, we have to have confidence in it and our country, and we are anxious to do the job. It is very true that we cannot finance this project alone. It is also true that the benefits will not be just for us alone. It is true that our grandchildren will help pay this loan back, and the grand total of the benefits, both direct and indirect, will pay it back several times, as we all should know and realize. It is for our children and grandchildren. Our Nation is just as great as we can make it. Just what makes a nation great is what it makes or produces. It can produce millions, but you can't eat money. We must eat. Let's eat, and eat well, while we are making those millions. Let's develop a 34,000-acre garden spot, which will take from 12 to 15 years at best if we get the money now to continue as planned. We can produce abundantly all of the vital and delicious foods we all love to eat and must have to live. I recently read an article which stated that 60 to 80 percent of all the food produced on the farms of our country was consumed in cafes or cafeterias. If all the loans made by our Government are half as sound as this one of ours, our Nation is certainly sound and always will be solvent.

Another thing I would like to mention is that we do have a little surplus food today. That may be bad, but it is not as bad as being that much short of having enough to eat. I would hate to think of my grandchildren trying to live on that surplus for the next 20 years, considering the way our population is increasing every year while the total number of producing acres is gradually decreasing. I, for one, do not want to have to depend on our good neighbors across the seas to help feed our people.

I am still quite young. I will be 100 years old 35 years from now, but I have lived through 2 World Wars and others of smaller proportions in that short time. Food is one thing that either wins or loses wars for a country. It was necessary to ration food in both of these wars, and it would seem to me that if we were ever involved in a third world war that we would use all of the surplus food in a big hurry.

I also might mention that in our contract we agree not to produce corn while it is surplus. Also, we are not located in what is known as the commercial-corn area.

I am not saying that the national budget should or should not be cut, but I am saying one thing for sure—our ability to produce the food to feed ourselves and the peoples of the world should be the last thing which should be curbed or curtailed. Again I wish to sincerely ask your assistance to help us keep going with this important project.

Remarks of Roger S. Thorley

My name is Roger S. Thorley, I am a banker in Ainsworth, Nebr., and president of the Niobrara River Basin Development Association. I appear here in behalf of this association and in the interests of my community and all the other communities and people interested in irrigation in this valley extending across all of northern Nebraska.

I was born in Ainsworth and have spent my entire life there except for time out for military service in World War II. My father and grandfather settled there over 50 years ago. They came from the rich farmlands of Iowa. Over the entire

span of my life my people have referred to this northern Nebraska country as the land of fast or famine, not like the rich farmlands of Iowa where good crops and good income were the usual fare rather than the unusual.

We were not sure good crops might be raised in this great country of northern Nebraska until the early 1950's when we had a couple of years of ample rainfall. We then discovered we did have the land that would produce the feeds so badly needed in our area. In these years we raised considerable grains and hay and we were able to produce our beef without purchasing considerable feed from more fortunate areas with either ample rainfall or irrigation.

The lesson learned by our farmers in the early 1950's that adequate water would pay and produce these feeds resulted in some pump irrigation. These pump irrigation farms are profitable, however we have found that good producing wells may be found only in some areas. Thus the farmer who cannot get a good well is still without any means of stability and also it applies to our ranchers as they have to transport their feed from purchases made many miles from home. When this feed has to be purchased and then transportation paid in amounts sometimes half the cost of the feed, it is not profitable for our ranchers and beef producers.

This area of Nebraska is often referred to as God's own cow country. This is true in the years of ample rainfall, but certainly is not true when we have suffered drought as we have the past 3 years.

I realize we have many people who feel more irrigation will create more reserves of feeds. This may be true in some areas. I know this will not be true in our area; we need and have needed this feed for many many years. Our people will feed it as they are now shipping into our area so many thousands of tons of feed. Much more could and would be fed if it were more feasible; it is not at prices with transportation added.

We do not feel our area has prospered favorably with the rest of the Nation. We are losing our young people because of the lack of available land and jobs. Irrigation would give our young people new hope and it is what our young are wanting. We feel with the help of our project we can stabilize our area economy and offer the standard of living enjoyed by most of the people of this great country of ours.

We understand we have a very feasible project and all the necessary legislation has been passed. We are here asking that this project might be started immediately. We need this project and feel that this money is much better spent than the many dollars spent in foreign countries. We have every reason to believe that our project will repay its people and taxpayers many times in the additional revenue to them and their Government, both in dollars and in the better living which we of this great America have every right to expect.

TOTAL ACREAGE IN AINSWORTH DISTRICT

Chairman HAYDEN. Highlight it.

Mr. KARABATSOS. The Ainsworth Irrigation District is composed of 33,960 acres. At the present time none of these acres are irrigated and when the project is approved and I hope started soon, no surplus crops will be raised on this since it falls under the Anderson amendment.

The economic feasibility of Ainsworth is 2.16 to 1. The 13 project average in the Missouri River Basin is 1.40 to 1. The rest of these projects fall from 1.76 to 1 down to 0.89 to 1.

The per repayment by water users as testified earlier is 30 percent. The overall average is 17.

I might point out that this 30 percent is computed on a 40-year basis, and the Senator knows these irrigation districts last longer than 40 years and after that 40 years another contract will undoubtedly be negotiated for another 40 years which makes that figure 60 percent for 80 years.

The simple average repayment for the Missouri Basin is $149 per acre. The Ainsworth repayment is 49 percent higher than the average of $222 per acre. This compares to $96, $170, $166, and $175 for other projects in the district.

Chairman HAYDEN. Would the fact that the work being undertaken at this time where costs are higher affect the prices compared with work that was done some years ago?

Mr. KARABATSOS. Most of these projects the ones that I am comparing here are the ones starting at the present time for which there are appropriations in this bill.

Chairman HAYDEN. I see.

REPAYMENT CONTRACT

Mr. KARABATSOS. The repayment contract for Ainsworth is $8.82 per acre and the payment capacity is $8.35 so our district, the only one in the Missouri River Basin is paying more than their payment capacity as computed by the Bureau of Reclamation.

Actually I think it figures up to 105 percent of payment capacity. The rest of the projects are lower.

The project was originally authorized in 1954 and reauthorized in 1956 with the repayment contract being signed in September 1956.

On the House side they did discuss benefits, and they pointed out in the report that it is $53.92. This $53.92 was a little vague from the person testifying. The question asked by the committee was more or less direct benefits. Well, that figure should have been $23.24. The remaining balance is for indirect and public benefits.

Mr. Chairman, I just summed up the remarks and I want to impress upon you that the delegation that came here to speak are highly interested in this project, they have been following it for years, and I have been out over the project and I have just noticed in the record the other day where Congressman Jensen said he was over the project and he thought it was the best one in the Missouri River Basin.

Thank you very much.

STATEMENT OF HON. CLAIR ENGLE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

GENERAL STATEMENT

Chairman HAYDEN. Congressman Engle.

Representative ENGLE. Thank you very much, Mr. Chairman.

There are two matters in particular that I would like to call to the committee's attention. The first is the Trinity River project appropriation and the second relates to the Sacramento Valley canals.

I need not add, I suppose, that all of these reclamation programs have my support and, of course, I do support the appropriations made available for the Bureau of Reclamation and for the Army engineers in this legislation for California.

But these two items in particular I want to mention because they have some problems.

On page 256 of part 2 of the House hearings appears my statement before the House committee and I call that to the committee's attention because I do not want to be repetitious about this, and there is no particular reason for going back over the situation in great detail.

TRINITY RIVER PROJECT

But what I told the House Appropriations Committee was this: The amount of money allowed for the Trinity River project, which is

$17,107,600, is about $17,700,000 short of the anticipated earnings of the contractors who submitted their bids predicated upon the specifications of the Bureau of Reclamation and the time schedule set up. The two outstanding contracts are for building the dam and for building the Clear Creek tunnel.

The dam is going in. It is an earth-filled dam with a cement face on it. The problem is this: the contractors get their dirt stacked up and do not get the cement on, and the high waters come in and wash out all of the dirt. They are in a hazardous position because if they do not proceed in a timely fashion they can have all their work wiped out by flood waters with tremendous added expense to themselves and to the Federal Government.

Now it is entirely possible that with the situation the way it is that the dam contractors will refuse to go into the bed of the river until they have enough money assured to carry the work forward on schedule. That would mean delay of a year.

The contractors would say: "We will wait until money is assured to permit construction without taking a chance on flood damage." so the limiting factor is the weather. The weather makes the schedule.

Chairman HAYDEN. As to that tunnel——

DIVERSION TUNNEL

Representative ENGLE. They can build the diversion tunnel.

Chairman HAYDEN. It is the same situation as up at Glen Canyon. They have to get the tunnel in before you can get into the bed of the river.

Representative ENGLE. That is right.

These contracts which are let, on which these appropriations are predicated are the Clear Creek Tunnel construction and the dam construction. But the people who are really concerned are the contractors who are building the dam. They just say that if they are going in there and get the dirt in and do not get the cement on, that they are apt to lose the whole business. If the contract is put over a year there is going to be additional expense to the Federal Government and the receipt of revenues from the project will be delayed.

So this is not saving money at all.

I took this up with the staff in the House side and they said: "Oh, well, these contractors always say that; they always say they don't have enough money." Well, I went back and checked again with the dam contractors, and they again expressed grave doubt that construction could proceed without assurance of additional funds. I believe that the Bureau of Reclamation agrees with this position.

I talked to representatives of the dam contractors this morning. And what I would like to suggest to the Senator is that proper staff investigation be made as to whether or not what I am saying is true.

Chairman HAYDEN. That will be done.

Representative ENGLE. If it is true, then additional money should be added because that is the sensible way to do it.

CORNING CANAL

The second item is the matter of Corning Canal, and I call the committee's attention to the statement made with respect to the Corning Canal on page 17 of the House Committee Report No. 552,

accompanying the bill H. R. 8090. Of course this is the report on the appropriations bill and here is what it says.

With respect to the Corning Canal distribution system the State Securities Commission has turned down a request for approval of a repayment contract because of the 160-acre limitation which it contained. The Bureau of Reclamation has no authority to execute contracts without this limitation and funds will not be needed for the Corning Canal until all legal questions are settled with respect to the figures 160-acre limitation.

I called attention, on the floor of the House when this bill was up the other day, that the State securities commission reversed its position and approved the contract.

There are three steps that repayment contracts have to go through. They have to be approved by the securities commission, they have to be voted by the people of the irrigation district, and they have to be validated by the court.

IVANHOE CASE

Now we had a case out there in California called the Ivanhoe case that went to the Supreme Court of California. The court declared that the 160-acre limitation was unconstitutional because it arbitrarily, they said, deprived individuals of their right to receive water, and this decision is going to complicate the situation somewhat.

On the floor the other day, the Appropriations Committee of the House made it plain in a statement made by Mr. Rabaut, which is in the record, that it did not intend to approve any funds until this Ivanhoe decision was straightened out.

The Ivanhoe case is being appealed to the United States Supreme Court. We do not know what they will do with it. If they reverse it, that is fine. If they do not reverse it, presumably on the basis of the position taken by the House committee, those canals will sit there in perpetuity, a monument to somebody's mistake, and the Corning Canal has had spent on it $3,680,000. The total cost will be $5,880,000. The canal, therefore, is 63 percent complete.

The people of that area are willing to pay for the water with or without the 160-acre limitation.

The question I raise is whether or not it is intelligent to permit the Government investment to sit there when those farmers are ready to take water and they will pay for it. Whatever the law is they will comply with it.

So I say what we ought to do is put the money back in for the Corning Canals, complete them, and if necessary, deliver this water on an interim basis. As a matter of fact, the Bureau of Reclamation has been delivering in the King's River area from Pine Flat Dam, and some others, for several years on a year-to-year basis.

Chairman HAYDEN. I know it is true on the interim basis.

Representative ENGLE. They can do that.

And here they sit there with the canal. The ditch is setting out there. It is a beautiful ditch. The sides are eroding and grass is growing in the bottom of it.

The farmers want the water. They are going to vote in the near future to approve the contract. The contract will be taken to the court for validation. It will set there until we get a decision out of the Supreme Court of the United States.

In the meantime, if these canals are complete, people there will start taking delivery of the water and start paying for it, and the Govern-

ment will start getting its money back, and they do not give a hoot if they put the 160-limitation in or leave it out. They want the water, and they will start paying.

That is all I have to say, Mr. Chairman, and I thank you and I thank you, Dr. Miller, for letting me get ahead of you.

Chairman HAYDEN. We will take up the Farwell unit.

Representative MILLER. Yes.

May I recapitulate a little to get the continuity?

Both of these projects have been approved. They have been approved by the Bureau of the Budget and apparently were left out on the House side because there was some misunderstanding on repayment of the contracts, and we hope your staff will look at it very closely as to what the actual figures should be. For the Farwell project we will hear from attorney Cyril Shaughnessy of St. Paul. And also from the project is Mr. Peter Badura, Mr. Andru Nielsen, and Mr. Manasil over here. They are all fine citizens from that area.

STATEMENT OF CYRIL P. SHAUGHNESSY, ATTORNEY, REPRESENTING THE LOUP RECLAMATION DISTRICT AND THE FARWELL IRRIGATION DISTRICT, ACCOMPANIED BY PETER I. BADURA, PRESIDENT, THE LOUP BASIN RECLAMATION DISTRICT AND THE FARWELL IRRIGATION DISTRICT; RUDY M. MANASIL, DIRECTOR; ANDRU NIELSEN, DIRECTOR, THE LOUP BASIN RECLAMATION DISTRICT AND THE FARWELL IRRIGATION DISTRICT

PREPARED STATEMENT

Mr. SHAUGHNESSY. Senator Hayden, if the chairman will permit me to file a written statement, I will be brief in my remarks and bring you a little bit up to date on our project.

Chairman HAYDEN. It may be filed with the record.

(The statement referred to follows:)

My name is Cyril P. Shaughnessy of St. Paul, Nebr. I am an attorney representing the Loup Basin Reclamation District and the Farwell Irrigation District with their offices at St. Paul, Nebr., and the Sargent Irrigation District with its office at Sargent, Nebr. At the request of our president, Mr. Peter I. Badura, it is my privilege to substantiate the need for irrigation in the Middle Loup River Valley, the affirmative actions taken by and firm determination of the people residing in our area to have irrigation and, particularly, to request this subcommittee to consider favorably the Bureau of the Budget's recommendation for funds to initiate construction of the Farwell unit.

In earlier years, the Congress made funds available for construction of the Sargent unit which, together with the Farwell unit, comprises the development program of the three irrigation organizations I have mentioned. The Sargent unit, representing about one-quarter of this development, and lying farther upstream, will be virtually completed this fall and our people are anxious to get on with construction activity for the remainder as represented by the Farwell unit. In further utilizing the waters of the Middle Loup River, we propose a diversion works, a feeder canal, a reservoir, and a system of distribution facilities to irrigate 52,500 acres of land and to provide other benefits in the form of flood control, fish and wildlife, and recreation. There is no hydroelectric power opportunity on this unit.

The Farwell unit was originally authorized in the Flood Control Act of 1944 and was reauthorized by the Congress last year. Plans for its development were

accomplished through cooperative efforts of the Bureau of Reclamation and other agencies of the Federal and State Governments together with our local districts. These plans have been coordinated and tie in with those for other parts of our valley; there are no conflicts of interest; we have filed for water rights; our official boards have approved the plan of development; these boards, representing both the irrigators and the towns and villages, have already entered into repayment contracts; the State of Nebraska has approved our plan of development and Gov. Victor E. Anderson has urged the Congress to place the unit in position to receive funds for initiation of construction. All of these things have been accomplished with diligence and dispatch by the farmers and townspeople as well. Now, after waiting 13 years for their development, the people are anxious that construction of their irrigation project be commenced this year.

The Farwell unit was justified by the Secretary of the Interior and was authorized by the Congress on the basis of the total benefits that will accrue from its operation. He found the benefit-cost ratio to be 1.88 to 1 (1.9 to 1) for 100 years as the minimum useful life of the works. For a 50-year period the ratio was 1.46 to 1. On either basis there is ample justification for our project.

As concerns repayment, our people this past March executed contracts with the United States pledging revenues from the reclamation (conservancy) district levy, and the full computed ability of the irrigators to pay for project operation and maintenance and toward the costs of construction. We believe our returns toward project costs in this respect are more favorable than most projects today. This is true especially considering that our project includes an unusually small amount of nonreimbursable costs—less than 4 percent—for flood control and fish and wildlife as shown in the report.

Lands of the Farwell unit are now dry-farmed and produce a limited number and yield of crops but they are capable of diversified high production under irrigation. Such irrigation cannot be accomplished through the use of ground waters. The use of water from this source has been attempted and experience as well as the results of technical studies show that the lack of gravels and sufficient groundwater yields will almost preclude such development. Our lands are fairly compact and once the water supply features are constructed, we can begin to bring these lands rapidly under irrigation. We propose to arrange for a development farm in the area and to initiate demonstrations as soon as the water becomes available in Sherman Reservoir. This will help our farmers accomplish a rapid changeover to irrigation.

These three members of the Farwell Irrigation District Board, who are also members of the Loup Basin Reclamation District Board, can verify that for the past 4 years we have experienced serious drought in our area. The inadequate rainfall for dryland crops and the inability of our farmers to follow a diversified farming program has led to soil depletions and low crop yields throughout the area. Moreover, the inability to produce sufficient dryland feeds has forced farmers and ranchers to reduce or hold their livestock numbers to a minimum. In 1955 and 1956, our corn yields from dryland harvested acres averaged but 5 and 6 bushels per acre respectively.

The serious plight of the farmers in the Farwell unit area has resulted in decreased business activity in St. Paul and other towns. Reduced feed production has forced many of the farmers to obtain assistance from the emergency drought programs. Up to March 1, 1957, 590 applications for drought emergency feed loans had been received in Howard County. Under this program 250,000 bushels of corn has been distributed to farmers.

The prolonged drought has resulted in a continued migration from the farms. While other parts of the United States, and particularly the Western States where irrigation is practiced extensively, have enjoyed a continuous growth in population, the local situation is quite the opposite. Within the last 2 years 20 farm families have been forced to move from their farms in the Farwell unit area. During the period from March 1, 1956, to March 30, 1957, 36 farm sales were held in Howard County alone; in the Farwell unit area farm sales numbered 70. Insufficient moisture resulting in low crop yields and reduced income has made it difficult for farmers to obtain credit. Local banks have reported a tremendous demand for loans—some of which are being refused because of the unstable cropping conditions. Farm loans in one of the St. Paul banks increased by 20 percent during the period December 1, 1955, to May 1, 1957. In this same bank deposits showed a 15 percent decrease during the same period. Active loans from the Farmers' Home Administration showed a 55 percent increase from March 1956 to March 1957. Business activity in St. Paul has been adversely affected by the drought conditions. A farm implement dealer in St. Paul reported a 60-percent

decrease in machinery sales from 1954 to 1956. Other types of business report similar experiences.

Adequate moisture every year provided by irrigation will improve and stabilize our entire economy. Prosperity on the farms will provide the stimulant for healthy business activity. With irrigation our farmers can be assured of a dependable crop every year. Experience has shown that, with irrigation, farmers can produce a more dependable and stable supply of feed grains, hay and forage, and in our area there are good possibilities that farmers will produce certain new crops, like vegetables and sugar beets. The soils and climatic conditions of our area are well adapted for the production of several vegetables including tomatoes, sweet corn, asparagus, and carrots. Just recently the Campbell Soup Co. announced plans for a pilot installation of a tomato processing plant at Kearney, about 50 miles southwest of the Farwell area.

In this future crop pattern, we will produce considerably more corn, oats, and barley; but because of heavy livestock feeding operations in the immediate area, we will actually sell less grain than we do at present. It has been stated on good authority that about three-fourths of the total feed crop production under irrigation will be fed to livestock on the farms themselves. The irrigation farmers will produce more hay and forage, which together with sugar-beet tops and other byproducts, will strengthen our livestock program, not only on the irrigated lands but on adjacent dryland farms as well. The increased livestock production would make a worthwhile contribution toward future increased requirements for meat products as well as providing a local outlet for increased production of hay, forage, and feed grains.

Within the past 2 months I noted in our paper a statement by Secretary of Agriculture Mr. Benson calling attention to the fact that American farmers will have to produce 40 percent more crops by 1975 with very little additional planting acreage. He stated the need for a 43-percent increase in vegetable and fruit production and a marked increase in the need for livestock production if present levels of income and dietary habits of the consumers are maintained. Further, that to meet these projected 1975 requirements through increases in cropland will require an additional 150 million acres. In the absence of new land, these requirements must be met by increased production on present acres. Irrigation in the Farwell unit and other sutiable areas will contribute materially to meeting these future requirements. An immediate start on construction of the Farwell unit would assure completion within 7 years and, assuming a reasonable development period, optimum crop and livestock production in this area could be attained by 1975.

For many years, the people in the Farwell unit have made a determined effort to place their project in a position for development. In 1945, we became a part of the Loup Basin Irrigation and Conservation Association. As a result of its efforts and our determination to accomplish the development of our project, we were successful in organizing the Loup Basin Reclamation District in 1950, a conservancy-type organization, encompassing lands of the Farwell and Sargent areas. At the hearing held by the State department of roads and irrigation in January 1950, no one appeared in opposition and in August of that year an election was held and the voters approved by a 2-to-1 majority the proposition to authorize the directors of the Loup Basin Reclamation District to assess a mill levy on all the tangible property within the district. Under this type of district, there is the opportunity for the townspeople as well as the farmers to make a financial contribution to the development and operation of the project on which both must depend for a productive agriculture. When it became apparent that a reclamation district organized under Nebraska law would not in itself fulfill all Federal requirements of a contractual entity, we undertook in 1954 the formation of the Farwell Irrigation District. Signatures of landowners representing 78 percent of the land within the district and approximately 90 percent of the resident landownership were obtained during the circulation of the petition. At the election held in November 1954, the organization of the irrigation district was approved by a 5-to-1 majority of the landowners. Throughout the promotional days and since organization of the reclamation and irrigation districts, our people have constantly voiced a desire for early development. They have organized satisfactory repayment entities, participated in the resolution of water-right problems, initiated and carried to completion the repayment contract negotiations, and have done all things necessary to obtain immediate irrigation development.

These men who are here today and others have made earlier trips to Washington and I have accompanied them, initially in seeking funds for the Sargent unit which was placed under construction about 3 years ago and more recently we

appeared before the Public Works Appropriations Subcommittee of the House of Representatives to request funds for the Farwell unit. The Loup Basin Reclamation District is the parent organization for both the Sargent and Farwell units and this organization, together with the Sargent and the Farwell Irrigation Districts, entered into contracts in March of this year for repayment and the operation and maintenance of our irrigation facilities on these two units. To my knowledge this is the first time in the Missouri River Basin when contractual arrangements have been consummated combining both a reclamation (conservancy) district and member irrigation districts.

In brief, our repayment contractual arrangement involves two lines: As concerns the distribution and drainage works, the United States has entered into two separate contracts, one with the Sargent Irrigation District and one with the Farwell Irrigation District. A third contract has been executed, for all water service aspects, with the Loup Basin Reclamation District. Immediate and original responsibility for the operation and maintenance of the works will be in the Loup Basin Reclamation District.

Under this arrangement, there is a maximum of interest and responsibility for the project on the part of the people directly affected by it, the repayment base is spread more widely and is of greater magnitude than would be true if only the irrigation districts were utilized, and it presents the opportunity to establish and cause to function an overall efficient organization responsible for the broader functions of project operation and maintenance. The owners of all tangible property in the towns and villages and rural areas are entering into a partnership with the farmers and their Government, giving their maximum financial and moral support to a development program which will vitally affect them all.

The Sargent Irrigation District with its 16,200 acres of land and the Farwell with its 52,500 acres constitute a desirable and efficient operating unit of 68,700 acres. Completion of these two units with unified operation and maintenance together under the management of the Loup Basin Reclamation District will permit a more efficient operation and a savings in operation, maintenance, and replacement costs. However, this is not the only advantage to be gained by completing the two units at the same time. The reclamation district through its ad valorem levy on property in the district—agricultural, urban, and industrial—will obtain additional revenues amounting to an estimated $35,000 annually at the beginning of the operating period, and an increased amount after the project development has reached the optimum stage. This represents additional revenues to be used in repayment of the construction cost and operation and maintenance cost for the irrigation districts, which can only be obtained when the two units operate together.

Up to the present time the Platte and Loup River Valleys in Nebraska have received construction funds for only one small irrigation unit as a part of the Missouri River development program. Yet these valleys contain a substantial percentage of the basin in terms of land suitable for irrigation and of people who could and are entitled to be benefited through irrigation development.

Our farmers and businessmen have been working for this development for the past 10 to 15 years. We are firmly convinced that a further delay will result in further hardship for our farm families and the businessmen who are dependent upon our agricultural economy. We have fulfilled all of the requirements including the execution of contracts involving two types of districts, irrigation and conservancy type. This combined with the good showing of feasibility should qualify our people for favorable consideration for an appropriation to start construction.

As representatives of the people who reside in the Farwell unit, we firmly believe that funds should be made available for construction at the earliest practicable date. Our reasons for supporting this stand are: (1) The need for a stable local economy in the Farwell area and in Nebraska and radiating to the Nation as a whole; (2) to arrest the outward migration of farm and town population in our area; (3) the very favorable attitude and support of all of our people as manifested in and through the formal organizations which they have created; (4) the demonstrated feasibility and present authorized status of the unit; (5) the lack of opposition to the project and the function that it can fulfill in benefiting other irrigation developments in the Middle Loup River Valley; and (6) our belief that the Farwell unit constitutes a very desirable part of the Missouri River Basin project and that we and others are entitled to the benefits that will accrue through greater utilization of our water and land in this area. We have just experienced 4 consecutive years of drought; have had one of our driest winters on record; and the prospects for a crop this season are still uncertain. Our people deserve the benefits this project can provide for them as well as their children. They ask

your favorable consideration of their request for appropriations for the Farwell unit here today.

Our directors, Mr. Peter I. Badura, Mr. Andru Nielsen, and Mr. Rudy Manasil and I are most grateful for the time you have given me for this presentation.

General Statement

Mr. Shaughnessy. It was our privilege to appear before you a few years ago on the Sargent unit and, since that time, the Sargent unit has been under construction and will be completed the next year.

For the record, my name is Cyril P. Shaughnessy, and I represent the Loup Basin Reclamation District and the Farwell Irrigation District.

I am here this morning, Mr. Chairman, with Mr. Peter I. Badura, who is the president of our district, and Mr. Manasil, Rudy Manasil, and Andru Nielsen, both directors.

The Bureau of the Budget approved our funds for our project, and we are here this morning to urge your committee to reinstate the funds so we can get on with our construction.

Farwell Unit

The Farwell unit was originally authorized in the Flood Control Act of 1944, but because we changed some of the physical features of the project the Bureau of Reclamation and Congressman Miller thought it was in order that we should have our project reauthorized. So last year the Congress authorized a project. So we are here this morning.

Our project has been reauthorized. The Bureau of the Budget has found that it is in order that funds should be made available for the early construction of the project, and the feasibility reports are all in.

Last year they told us that they had to have a repayment contract negotiated. So with diligence and dispatch we entered into a type of contract, the first in the Missouri River Basin. In other words, the Loup Basin Reclamation District, which is a conservatory type district has entered into a contract to operate the supply works, not only of the Sargent unit but also of the Farwell unit. So at this point, actually, the Farwell unit is a continuation of the overall project, making up the Sargent unit and Farwell unit. Then the two individual irrigation districts have entered into like contracts for the repayment of the distribution of drainage works.

So not only are the water users going to pay back their money that has been loaned to them by the Government, but actually the people residing in the town are going to pay back their ad valorem tax levy, a certain payment of the tax.

Chairman Hayden. That has been adopted in other places, and I think it is a very wise arrangement.

Mr. Shaughnessy. So we are somewhat taken aback when we find that our projects have been left out because actually we have gone a step further than anyone else in the Missouri River Basin, insofar as we are trying to get everyone to participate in our program and give back to the Government the utmost part of our ability to repay.

Chairman Hayden. Well, it is logical and proves that it is not just the farmer alone that prospers by reason of an irrigation development.

Mr. Shaughnessy. I am told that out in the Scott's Grove area

where Dr. Miller comes from, that the income taxes that have been paid in that area in the past year have more than paid for the project that was built out there.

Chairman HAYDEN. I use the figure in an illustration with respect to the Salt River project. The original cost of it was very small, but we have paid in the last 20 years $600 million into the Federal Treasury from Maricopa County, Ariz.

Mr. SHAUGHNESSY. Only with irrigation, I presume.

Chairman HAYDEN. Withour irrigation it would still be a desert.

Mr. SHAUGHNESSY. Mr. Chairman, another reason that we feel that irrigation is so essential and so important to our way of life out in Nebraska and any State in the West is from an economic point of view of stopping this migration of people from the farming areas to the cities. I am not necessarily an economist, but it strikes me that it would be better to take care of the people at home rather than let them go to the cities and feed them through soup lines, and so forth.

We do have that migration not only in my county and area, but I think it is all over the West. If we could stabilize our economy and say to this young man: "Well, you go out on this farm this spring and we know you are going to raise a crop because you are going to have an adequate water supply and going to have all the things that make up for our way of life out there."

Then I am sure with his success the businessman is going to prosper.

I do not wish to prevail upon you, Senator.

Just briefly then, we fulfilled all our requirements that the Bureau of Reclamation has asked us to do. We fulfilled all the requirements that the Congress has asked us to do, and now we are here this morning asking your good office to see fit to restore the $750,000 that we are asking.

It is not a figure by any means. It is just a means to making our way of life out in Nebraska just a little bit better.

Thank you so much for your time.

Chairman HAYDEN. It was a good statement.

Representative MILLER. Thank you very much, Senator.

Chairman HAYDEN. Thank you.

NATIONAL RECLAMATION ASSOCIATION

STATEMENT OF WILLIAM E. WELSH, SECRETARY-MANAGER

PREPARED STATEMENT

Chairman HAYDEN. Mr. Welsh, do you have a statement?

Mr. WELSH. Yes, sir; I have.

Mr. Chairman, my name is William E. Welsh.

Chairman HAYDEN. Your entire statement will be included in the record.

(The statement referred to follows:)

My name is William E. Welsh. I am secretary-manager of the National Reclamation Association. I am appearing before you today in behalf of that association.

There are two provisions of the appropriations bill for public works as it was reported by the House committee which are very disappointing to the members of the National Reclamation Association: (1) The terrific and drastic cuts which

were made on appropriations for general investigations, including the Missouri River Basin, as well as the remainder of the West, and (2) the elimination of three new starts.

GENERAL INVESTIGATIONS

In order that we may have before us, for consideration at this time, the action taken by the Congress on general investigations during the past 10 years, I am submitting herewith a tabulation showing the appropriations for that period:

Appropriations—General investigations

Fiscal year	General investigations outside Missouri Basin	Missouri River Basin investigations	Total
1949	$4,637,087	$10,989,640	$15,626,727
1950	5,477,500	11,076,053	16,553,553
1951	5,635,000	6,557,434	12,192,434
1952	4,500,000	5,499,550	9,999,550
1953	4,000,000	301,930	4,301,930
1954	3,000,000	1,457,431	4,457,431
1955	3,750,000	2,311,150	6,061,150
1956	5,104,000	2,915,000	8,019,000
1957	[1] 5,680,000	[1] 2,879,500	[1] 8,559,500
1958 (budget recommendations)	5,932,000	3,000,000	8,932,000
1958 (House committee report)	4,500,000	2,000,000	6,500,000

[1] Preliminary.

A drastic cut in general investigations strikes at the very heart of future reclamation. It must be remembered that general investigations is the very basis upon which all future reclamation will be carried forward. If we are to have continued orderly reclamation throughout the West in the future then we must have adequate general investigations today.

The above tabulations, especially if the House recommendations are sustained, show the terrible fluctuation to which general investigations by the Bureau of Reclamation would be subjected. Such a program cannot possibly be carried forward successfully on a stop-and-go basis. It cannot be turned off and on like water from a spigot. The Bureau of Reclamation is recognized as one of the greatest engineering and construction organizations in the history of man. It takes many years to educate the personnel of such an organization in the intricate and technical field of reclamation. Such a program should be carried forward with continuity. If the reduction of more than 25 percent in general investigations is sustained and the personnel of this great engineering organization is dispersed, then it will require many years to rebuild the organization when adequate appropriations are again made available.

We have felt right along that the reductions that were made in general investigations in 1953, and sustained again in 1954, were entirely too drastic, and we have been very much pleased with the gradual increase in those appropriations since that time. We have stated before this committee on numerous occasions that we believe our ultimate objective should be to appropriate approximately $10 million annually for general investigations, and that figure should be kept fairly constant. When we consider that this program is so vitally important to the future growth and prosperity of approximately 60 percent of the area of the United States, then we must conclude that the figure of $10 million is very reasonable. A reduction that has been proposed by the House committee would cause damages to future reclamation that would require years to overcome. Therefore, we strongly support the budget recommendations for this item.

NEW STARTS

The House bill as reported by the committee disallowed three new starts. Two of these, the Ainsworth and the Farwell units in Nebraska, are urgently needed.

I am advised that the Ainsworth unit is being required to repay up to the ability of the water users under the terms of the contract that has been approved. Like all other Missouri River Basin project units, the power revenues are expected to take care of the remainder of the cost.

The Farwell unit, I am advised, would show a far more favorable benefit-cost ration if indirect benefits were taken into consideration and for a period of 100 years instead of the 50 years which was used. The farmers in the area of the Farwell unit are confronted with a desperate situation. There have been droughts over a prolonged period of years until, at the present time, farmers are being forced to sell out at whatever price they can get and move away to some other locality. Early this spring farm sales were being held at such a rate that farm auctioneers were required to hold two sales a day. The people in this area are desperately in need of the relief which the Farwell unit would provide.

I am advised that because of local differences, the Shoshone Extension Unit in Wyoming is not being urged too strongly at this time.

AGRICULTURAL SURPLUSES

The fact that we as a Nation are confronted with agricultural surpluses at the present time, is frequently used as an argument against further reclamation development. The question is asked: Why should the Federal Government spend money to build reclamation projects and bring more land into agricultural production when we are already producing more agricultural crops than we can consume? At first thought, that question seems logical. However, if we are to thoroughly analyze this question, then there are several significant factors which should be taken into consideration.

1. Our agricultural surpluses are only temporary.
2. More than 1 million acres of good agricultural land is being diverted annually for other purposes.
3. Agricultural surpluses represent only 5 percent of our total production.
4. Our population is increasing at a tremendous rate.
5. Reclamation projects require many years to complete.
6. Federal reclamation projects produce only a very small percentage of our surplus crops.
7. Our total crop acres harvested has reached its maximum (approximately 350 million acres) and cannot be increased except through Reclamation.
8. There are practically no other lands available except through reclamation.
9. It is doubtful whether production per acre can be increased rapidly enough to meet the requirements of our dynamic growth in population.

Now, it shall be my purpose to discuss these factors in the same order in which they appear above.

Surpluses temporary.—Our agricultural surpluses, although a serious problem today, are looked upon by the heads of the agencies having responsibility over those problems in the Department of Agriculture as only temporary.

Dr. B. T. Shaw, Administrator, Agricultural Research Service, Department of Agriculture, on several occasions when appearing before the House Subcommittee on Agricultural Appropriations, has told the committee that we will reach a balance between agricultural production and the consumption of agricultural crops by 1962 and perhaps earlier. A year ago, in referring to the time when we might reach such a balance, he stated: "My own opinion is about 1960." But, in response to a question from Congressman Horan, suggesting that in his opinion it might be 1963, Dr. Shaw responded, "Well, it is in that range. I would not differ with you on 1960 or 1963." On several previous occasions Dr. Shaw's testimony was to the same effect. He did not testify on that specific question this year, but I visited with him a short time ago and he told me then that his opinion is still the same.

In my opinion, Dr. Shaw is in a better position than anyone else in the United States to get firsthand information on this problem. It is his responsibility to supervise the work in agricultural research within the Department and that includes the responsibility of determining our future requirements and our ability to meet those requirements and, therefore, the extent to which our production must be increased through research. Dr. Shaw's opinions should carry great weight with all of us.

Donald A. Williams, Administrator, Soil Conservation Service, in an article in the May issue of Coronet entitled "Our Farmlands Are Shrinking," makes the following statement: "In spite of the present temporary surpluses in some crops we shall in our lifetime need every one of these acres to feed an estimated 220 million people by 1975. * * * In our time we shall see the rising population and the dwindling amounts of farmland meet. From that date on you and your children can no longer be assured the healthy, balanced diet to which we have become accustomed."

More than 1 million acres lost annually.—Although everyone realizes that with our rapid suburban development, extensive highway program, and the expansion

of industrial development and airports that we are losing a lot of good land, it comes as a shock to most of us to learn that "nearly 1,250,000 acres of our very best farmlands are buried under the steel and concrete of housing developments, factories, highways, shopping centers, and going into other nonagricultural uses" last year. Yet, this is the astounding statement made by Donald A. Williams in his article in the May issue of Coronet referred to above. This revealing article appears on page 148 of the magazine. About a year ago the Soil Conservation Service completed a State-by-State survey to find out, Mr. Williams said, how fast these farmlands will disappear. "We were amazed," he said, "and concerned at what the figures showed. * * * Our survey showed that all over the United States the fertile land is going fast. Ohio, Indiana, Georgia, Florida, and Texas, for instance, have each lost about 1 million acres in the last 15 years. Connecticut has lost 33 percent of its original resource of cultivatable land, and if the present pace should continue 10 years from now there may not be a farm with good, cultivatable acres left in the State. In all, about 10 percent of our Nation's original endowment of choice land has become urbanized."

In a speech delivered at Lincoln, Nebr., a little more than a year ago, Mr. Williams stated:

"Some of our best agricultural land has been and is being withdrawn to nonagricultural uses. More than 115 million acres are currently occupied by cities, highways, roads, and railroad rights-of-way, Defense Establishments, factories, mines, airports, parks, etc. About 80 million acres of this was originally good cultivatable land * * *. It is often the best agricultural lands that are being diverted to suburban developments, highway growth, and industrial expansion. * * * If continued at the present rate, this withdrawal could have a substantial bearing on the future ability of agriculture to meet demands of the Nation."

Because of the position that Mr. Williams holds as head of the agency which has the responsibility of looking after our Nation's land, we consider his opinions and the information made available to us by him to be extremely important. We most assuredly recommend for reading the article by Mr. Williams in the May issue of Coronet magazine.

Agricultural surpluses 5 percent of total production.—Dr. Shaw, on several occasions, has testified that our agricultural surpluses represent the production of about 17 million acres and that is only 5 percent of our total crop acres harvested.

Population increasing.—It is a widely publicized fact that our population is increasing at the rate of 2,800,000 annually. That means 2,800,000 more mouths to feed, and on the basis of 2 acres per person that will require an increase in food supplies annually equivalent to the production of 5,600,000 acres. When that figure is considered along with the information that we are losing 1,250,000 acres of good agricultural lands annually to other uses, it becomes very significant. Furthermore, statistics tell us that the real upsurge in birthrates occurred during World War II and that when that generation becomes of marriageable age, we can expect an even greater increase in birthrate and population.

Reclamation projects require years to complete.—Too often people have the impression that when a reclamation project is authorized it is only a year or so until the farmlands under that project start to produce agricultural crops. Actually that is a long way from the truth. The following schedule of events in connection with the Columbia Basin project in the State of Washington indicates the time that is required to bring a reclamation project into agricultural production.

Milestones in the history of the Columbia Basin project

First report on Columbia Basin, Army engineers	1879
Brook Lake plan to irrigate land near Ephrata, partly built, but failed	1897–98
First Reclamation Service surveys	1904–05
Lake Wenatchee plan; Quincy Valley irrigation district formed. Plan turned down by State because of cost	1910–14
Columbia Basin Irrigation League formed to reclaim land with water from Idaho lakes	1918–19
Report on Columbia Basin project by Col. George W. Goethals, world famous builder of Panama Canal, submitted to Congress	1922
Congress appropriates $600,000 for Columbia Basin investigation	1923
Army's 308 report, including Bureau of Reclamation findings, determines Columbia River as water source	1931
Construction begins on Grand Coulee Dam	1933
First gravity water to Columbia Basin project lands	1952
Water to be delivered to first half of project by	1961
Water available to remainder of project	1975[1]

[1] Or later.

FORTY-TWO YEARS FROM BEGINNING OF CONSTRUCTION—96 YEARS FROM BEGINNING OF PLANNING

The Garrison project, North Dakota, and the Upper Colorado project are also illustrations of years required to complete a project.

Reclamation projects produce only small percent of surplus crops.—It is interesting to note that Federal reclamation projects are only producing a very small percentage of crops that are in agricultural surplus. There are 5 principal crops which make up about 87 percent of our agricultural surpluses, namely, wheat, cotton, corn, tobacco, and rice. Actually, there is only one of these crops that is produced in any appreciable amount on the reclamation projects of the West. This is cotton, and practically all of the cotton is produced on old projects that have been in existence for many years. The following tabulation, based upon information released by the Commodity Stabilization Service, United States Department of Agriculture, shows the percentage of these crops that are raised on Federal reclamation projects as follows:

	Percent
Wheat	2.2
Upland Cotton	5.3
Corn	.46
Tobacco	None
Rice	.54

Crop acres harvested.—The total crop acres harvested in the United States has remained virtually the same during the past half century. There has been some fluctuation from time to time, but no material increase, according to the record of the United States Department of Agriculture as reported in Agricultural Outlook Charts, 1956, by the Agricultural Marketing Service and Agricultural Research Service. In 1954, the total crop acres harvested was 345 million.

No other lands available.—Occasionally the statement is made that there are large areas of land in the Eastern States that can easily and economically be brought into agricultural production. Mr. Donald Williams, Administrator, Soil Conservation Service, answered this argument in a letter to Senator Watkins (Utah) dated January 24, 1956. In that letter, he pointed out that much of that land would cost from $60 to $150 per acre to clear and drain. In addition to that, in many instances, it would require fertilizer costing from $10 to $60 per acre. Furthermore, he pointed out that some of this land lies in small tracts inaccessible while other areas will require major improvements. Some additional lands may be provided through reclamation, but most assuredly, new lands cannot be brought into cultivation through reclamation or by any other means anything like as fast as we are losing good agricultural lands to other uses.

Crop production per acre.—During the early and middle thirties, production per acre dropped extremely low as a result of widespread drought and low prices with resulting lack of incentive. During the decade from about 1937 to 1948 production per acre increased quite rapidly due to the increased use of modern machinery, more widespread use of fertilizers and better methods of controlling insects and plant diseases. However, during the decade following, since 1948, the production per acre has not increased anything like as rapidly as during the previous decade. The graph shown on page 17 of Agricultural Outlook Charts, 1956, published by the Agricultural Marketing Service and Agricultural Research Service, USDA, indicates a continued gradual increase, but a decided leveling off during the latter 10-year period.

SUMMARY, AGRICULTURAL SURPLUSES

In summarizing the points discussed in connection with agricultural surpluses, I would like to quote from an address delivered by Hon. Ervin L. Peterson, Assistant Secretary of Agriculture, having general supervision of conservation and research. In his address, delivered at Salt Lake City last fall, Mr. Peterson said:

"In spite of these circumstances, there are several reasons why feasible reclamation projects should go forward. In the first place, there is a substantial time lag between project planning and project operation and production. Our population is increasing and our food requirements will, therefore, also increase. But even more significant is the fact that city enlargement, the building of airports, highway construction, and the taking of land for other public purposes are now annually taking from productive use about 1 million acres of land per year, nearly half of which is good agricultural land.

"Furthermore, our cropland base has been static for the past 35 years. The increment to production has resulted from the release of acreage formerly used to

feed horses and mules and from the application of science and technology will continue to exert an upward pressure on gross physical output, I am convinced that, all factors considered, the long-run benefit to the Nation requires the continued development of those of our physical resources susceptible to economic benefit.

"Moreover, many, if not most, of our reclamation projects are multiple-purpose, extending their benefits widely throughout our entire economy—and certainly adding direct and immediate benefits to the area and region wherein they are located. Taking a longer look ahead, the Agricultural Research Service of the Department of Agriculture released in August of this year Agriculture Information Bulletin No. 162, entitled 'Farm Output—Past Changes and Projected Needs.'

"Let me make it clear that the report in this document is in the nature of a projection or an estimate. It has been carefully and objectively drawn on the basis of information presently available to our scientific people. They estimate that by 1975 we will need to have increased our total farm output by 34 percent over the 1951–53 period, and increased our livestock and livestock products output by 45 percent over the same period.

"Moreover, the American consumer has expressed a preference for the products of animal agriculture and for fruits and vegetables. There has occurred in this country in recent years a marked upgrading of our national diet. We believe these trends will continue. With a static cropland base and with the losses of cropland occurring in a growing Nation, and with the benefits of reclamation projects extending so widely throughout our economic structure, there seems to me to be every reason why every economically feasible project should continue to go forward. Add to this situation the very apparent need to develop all of our water resources as fully and as completely and as rapidly as possible, there is even greater reason to move forward."

RECLAMATION HAS ALREADY BEEN DRASTICALLY REDUCED

An examination of the records of appropriations and expenditures of the past decade will show very clearly that the amount of money available to reclamation has already been drastically reduced. Following is a tabulation showing the total appropriations to reclamation for the 10-year period beginning with the fiscal year 1949 and through the appropriations for fiscal year 1957, and also the budget recommendations for fiscal year 1958:

1949	$271, 833, 717	1954	$148, 314, 210
1950	367, 197, 461	1955	168, 129, 711
1951	277, 732, 134	1956	185, 274, 381
1952	241, 558, 510	1957	199, 491, 778
1953	214, 887, 752	1958 (budget)	203, 349, 000

RECLAMATION BENEFITS ENTIRE NATION

Reclamation is a good investment.—This is a fact which we believe is not always appreciated, but one which we believe should be emphasized. Every 4 years the value of crops produced on reclamation farms equals the total appropriations for reclamation since the program was started 55 years ago. The cash value of the crops produced last year was more than $827 million. The total value of the crops produced since the reclamation program was started in 1902 is $11,398 million. More than half of this total was produced during the past 8 years. Furthermore, many of the big reclamation projects which were more costly to construct and which will eventually bring in large agricultural yields are just getting started in agricultural production. It is estimated that the Federal Government has received nearly $5 billion in Federal taxes from reclamation projects and the trade areas supported by those projects since 1902, and most of this has come in during the past 10 or 15 years. Power revenues have repaid to the Federal Treasury $532 million, while the irrigation farmers have repaid more than $121 million. Thus, from a financial standpoint reclamation projects repay the investment in many ways.

Reclamation creates homes and opportunities.—More than 3,200,000 acres of desert land have been reclaimed and more than 4,140,000 acres have received supplemental water. Ninety-three thousand five hundred new farms have been brought under irrigation. Three hundred sixty thousand American citizens are living on those farms and 1,800,000 people are living in areas supported by recla-

mation. These reclamation communities will stand as a testimonial for centuries to come to the worthwhile value of reclamation and the far sighted vision of those who inaugurated the reclamation program more than half a century ago.

Reclamation stimulates business.—The farmers living on reclamation projects are excellent permanent customers for the manufactured products of the Eastern States.

Reclamation has improved the diet and health of the American people.—A large percentage of the green vegetables and fresh fruits that are an important part of our everyday diet today are grown on western irrigation projects. And these green vegetables and fresh fruits have contributed immensely to the health and the well-being of the people of this Nation.

RESOLUTIONS

At the annual meeting of our association which was held in Salt Lake City last November, a number of resolutions were adopted dealing with problems that are the responsibility of this committee. At this meeting there were more than 600 delegates in attendance. These delegates were the active leaders in reclamation and water user development from each of the 17 Western States. The resolutions which they adopted set forth a broad, constructive, forward-looking program visualizing the ultimate full development of our best western water resources.

Copies of those resolutions which pertain to the responsibility of this committee are attached to this statement and made a part hereof. They include Resolution No. 4: Authorization and Appropriations for Continued Reclamation Development, Resolution No. 5, Appropriations for Reclamation Planning; and Resolution No. 6, Adequate Appropriations for Water Development.

CONCLUSIONS

On behalf of the members of the National Reclamation Association, I wish to express to this committee our sincere appreciation for the consideration that has been given to our western reclamation program over a period of years. In closing I would like to again urge that the committee make available for general investigations the amount of moneys that were recommended by the Bureau of the Budget so that it may be possible for the Bureau of Reclamation to continue with this vitally important phase of this work which has such direct bearing upon all future Reclamation. I would like also to urge that the committee consider favorably the request for new starts which are so extremely important to the areas most directly affected.

Respectfully submitted.

WILLIAM E. WELSH,
Secretary-Manager.

RESOLUTIONS ADOPTED BY NATIONAL RECLAMATION ASSOCIATION, SILVER ANNIVERSARY MEETING, SALT LAKE CITY, UTAH, NOVEMBER 1956

RESOLUTION NO. 4. AUTHORIZATION AND APPROPRIATIONS FOR CONTINUED RECLAMATION PROGRAM

Whereas it long has been recognized that water is the lifeblood of municipal, agricultural and industrial existence, and that an adequate supply of water is essential to the improvement of the American standard of living; and

Whereas remaining undeveloped water supplies are limited in amount, erratic in availability, requiring major storage for control, and located long distances from necessary points of use; and

Whereas continuous conservation, development, and utilization of the water resources of the States of this Nation are necessary to the growth of the Nation and must keep pace with the increase in population and with the needs of the Nation; and

Whereas the reclamation States provide expanding markets for the Nation's goods and are absorbing a large share of the increase in population in the United States because of the location of needed and newly discovered raw materials in the area and the ever present necessity for the decentralizing of industry in the interest of national defense; and

Whereas the Federal Government, since its inception, has recognized its responsibility in the support of improvement resulting in public benefits, including the Reclamation Act of 1902 and subsequent legislation relating to the development and construction of major multiple-purpose water use projects; and

Whereas the development of plans and the construction of basinwide projects for the full use of a water resource is a difficult, complicated time-consuming process, sometimes requiring decades of effort; and

Whereas basinwide multiple use projects frequently involve many States having common interests in interstate streams; and

Whereas the magnitude and necessity for multiple use basinwide developments within the framework and limitations prescribed by interstate compacts and State laws require joint action by the States involved and the full unanimous support of all reclamation States; and

Whereas greater public understanding and appreciation of local, regional, and national benefits of the entire reclamation program are necessary: Now, therefore, be it

Resolved, That:

1. The National Reclamation Association vigorously reaffirms its position in support of the basic principles of reclamation accepted as national policy for more than 50 years, namely, the use of Federal money without interest for the irrigation features, the use of power revenues on a feasible economic basis to help pay the cost of reclamation and the inherent right and obligation of the people of the reclamation States with the assistance of the Federal Government to develop fully their water and power resources in accordance with applicable interstate compacts and the water laws of the respective States, which are and should be binding on the United States in the development of water resources.

2. The reclamation States, through the directors of the National Reclamation Association, be urged vigorously and unanimously to support a reclamation program designed to fully develop the land and water resources of the reclamation States within the limit of available water supplies.

3. The officers of the National Reclamation Association be directed to continue a vigorous and expanding program of information relating to reclamation and conservation of our water resources through a fearless presentation of the facts.

4. The officers of the National Reclamation Association bring to the attention of the President and Congress the extent to which the national welfare and available expanding markets will be impaired and curtailed if the Federal reclamation program is not expanded.

5. The officers of the National Reclamation Association bring to the attention of the President and the Congress the urgent need for authorization of new projects, now pending before Congress, and potential projects justifiable under the law which will develop, control, conserve, and utilize the water resources of the reclamation States.

6. The officers of the National Reclamation Association devise ways and find means to inform the public, through the press and other media, of information on the basic facts and far reaching benefits of present and proposed water resource development.

RESOLUTION NO. 5. APPROPRIATIONS FOR RECLAMATION PLANNING

Whereas reclamation development requires sound planning and investigation ahead of the actual construction of projects; and

Whereas the rate of planning of such work is lagging behind the rate of construction: Now, therefore, be it

Resolved, That the National Reclamation Association urge and actively work for an annual appropriation adequate to carry on needed planning of reclamation projects by the Bureau of Reclamation.

RESOLUTION NO. 6. ADEQUATE APPROPRIATIONS FOR WATER DEVELOPMENT

Whereas the primary objective of the National Reclamation Association is the complete development of the land and water resources of the West; and

Whereas the accomplishment of this objective calls for adequate appropriations by the Congress: Now, therefore, be it

Resolved, That the National Reclamation Association hereby directs its officers to support before the Congress requests for sufficient appropriations to:

A. Permit the Bureau of Reclamation and the Corps of Engineers to continue progressive construction programs in consonance with the needs therefore;

B. Support acceleration of the Forest Service program of those types of revegetation, watershed restoration, range improvements, and physical improvements of national forests; which will improve water production and will control erosion;

C. Support and continue the snow surveys and streamflow forecasting of the Department of Agriculture;

D. Permit prompt and continuing acquisition, publication and distribution by the Geological Survey of basic data respecting both streamflow and ground-water resources throughout the Nation;

E. Permit completion of standard topographic mapping of the United States, if possible, by the year 1970;

F. Support research, investigation, and action programs in soil and water conservation, basic and essential to the sound development and full continued care of the Nation's land and water resources basinwide and in harmony with multiple-use projects development;

G. Support the land capability inventory to be completed as soon as practicable;

H. Support collection and dissemination of basic meteorological data by the United States Weather Bureau: Be it further

Resolved, That the various affected States are urged to give full support to the foregoing program.

GENERAL STATEMENT

Mr. WELSH. My name is William E. Welsh. I am secretary-manager of the National Reclamation Association.

There are just two points that I want to mention among many others that I covered in my statement.

The first is general investigations.

I have appeared before this committee a good many times now on behalf of the National Reclamation Association and, under the direction of our board of directors and our members at various times, numerous times, I have emphasized importance of maintaining general investigations on the continuity basis.

To carry on the general investigations successfully, there must be trained and experienced personnel within the Bureau. Such personnel, such an organization cannot be maintained on a stop-and-go basis. If the appropriations are cut off one year and then we want to bring them back again the next year, in the meantime the organization has dispersed and the men are gone. It takes years to get trained men back on the job again.

On the second page of my statement at the top of the page is a tabulation showing the amount of moneys that have been appropriated for general investigations both within the Missouri Basin and for the area outside of the Missouri Basin over the past 10-year period. That will show the fluctuations to which general investigations have been subjected.

We believe, and I was talking with the Commissioner just a few days ago and he concurred, that we should gradually strive to build that fund back to about $10 million, and we should hold it at about that. It was gradually being increased.

It has gradually been increased. It has been now for the past 4 or 5 years, and we are working toward that amount. We believe that would stabilize our Commission particularly as to the future because general investigation is the very heart and core of the future reclamations. If we do not have adequate general investigations today, we will not have an adequate reclamation program tomorrow.

Chairman HAYDEN. You make a very good argument. It must be maintained. And so far as I know there is no group of engineers in the world more qualified in this field——

Mr. WELSH. That is right.

Chairman HAYDEN. Than the men in the Bureau of Reclamation.

Mr. WELSH. That is right.

Chairman HAYDEN. Members of that staff have been borrowed and sent all over the world to pass on reclamation projects in other countries, and they have lent very valuable assistance to our free world and for our allies in that respect. They could not get the talent anywhere else.

Mr. WELSH. That is the way we feel very strongly, Senator.

AINSWORTH AND FARWELL UNITS

The other point I wanted to discuss are these two new starts that these gentlemen in Nebraska, speaking on behalf here this morning. The Ainsworth unit and Farwell unit.

Those projects are very, very badly needed in that area. I do not think it is news to you to state that they have been suffering from a period of droughts, droughts over a period of years, until they are confronted with a very serious situation.

One of these gentlemen sitting here told me just after he appeared before the House committee a few weeks ago that in the Farwell unit area sales were being held so fast, people were selling out and moving out, that the auctioneers could not hold one sale a day and meet the demands. They were having to hold one sale in the morning and another in the afternoon. People were just selling out that fast. They cannot make a go of it under existing circumstances. And they tell me that the same thing is virtually true in the Ainsworth area that those people are desperately in need of these projects. It would do a lot to stabilize the economy of the area.

As was pointed out the Ainsworth unit would be making under the terms of this contract repayment up to its ability and, as Mr. Karabatsos has said that would carry on in the term contract for another 40-year period after this first period. And with respect to the economic justification of the Farwell unit I am told that if that was based on the indirect as well as the direct benefits and carried over longer period of years, instead of 40 or 50 years, that it was done, that that project would show a much more favorable economic benefit cost ratio.

We strongly support both of those projects, Senator.

Representative MILLER. Thank you.

Chairman HAYDEN. Thank you.

STATEMENT OF J. D. MANSFIELD, SPECIAL COUNSEL FOR THE CITY OF YUMA, ARIZ.

PREPARED STATEMENT

Chairman HAYDEN. Mr. Mansfield, city attorney of Yuma Ariz.

Mr. MANSFIELD. Mr. Chairman, for the record my name is J. D. Mansfield, and I appear here today as special counsel for the city of Yuma, representing the area's interests concerning our domestic water supply.

With your permission I would like to file a written statement with the report for inclusion in the record.

Chairman HAYDEN. That may be done.

(The statement referred to follows:)

My name is J. D. Mansfield, and I appear here today as special counsel for the city of Yuma, representing the Yuma interests.

The problem which we would like to present to you today was before the Senate Committee on Interior and Insular Affairs earlier this year. On April 25, 1957, the Subcommittee on Irrigation and Reclamation held a hearing, at which time representatives of our area and the Department of the Interior appeared. Subsequently, and on April 30, 1957, the full committee passed a resolution directed to your committee. I understand that resolution has been officially transmitted to this committee and is on file. We assume it will be made a part of today's record. Without reading the rest of the resolution into the record, we think it would be well to highlight its provisions.

The resolving portion of the resolution stated that it was the opinion of the Senate Interior and Insular Affairs Committee that the Secretary of the Interior had the responsibility under the Colorado River Front and Levee System Act to provide the remedial facilities to permit the diversion of Yuma's domestic water supply, which was begun in 1893, and the Secretary was urged to construct the required facilities as soon as funds were provided. The Senate committee also recommended to the Appropriations Committee an allocation of $200,000 in this year's Public Works Appropriation bill under the authority of the Colorado River Front and Levee System Act to provide for the construction, operation and maintenance of the necessary works in the river to rectify the present condition. We believe that it would be well to summarize the factual situation upon which the Senate Interior and Insular Affairs Committee took that action and made their recommendation to you.

INTRODUCTION

The city of Yuma uses and must use the Colorado River as its sole source of supply for domestic water. All of this water must come by diversion from the Colorado River because of the high salinity of all of the underground water in the Yuma area. The metropolitan area of Yuma, based on a recent survey made by the Stanford Research Institute, has an estimated population of 32,000 people. During the past year an extreme emergency condition has developed which threatens to create a condition which would affect public health and general welfare of the city of Yuma. Activities of the United States on the Colorado River upstream from the diversion point for Yuma's water supply have created conditions at the point on the Colorado River from which the city's water supply is taken which must be corrected immediately to avoid calamitous results. The purpose of my statement is to summarize the problem, the responsibility of the United States to correct the problem, statutory authorization for the United States to perform the corrective work and a proposed plan of remedial facilities.

HISTORICAL BACKGROUND OF WATER DIVERSION

On March 16, 1893, a right was initiated to divert from the Colorado River 1,000 miners inches of water for domestic and industrial purposes in the city of Yuma and its environs. This right is equivalent to approximately 25.6 cubic feet per second. The point of diversion for this domestic water supply is now, and has been since 1893, at the site of Yuma's present water plant. From the beginning in 1893, Yuma's domestic water supply, has always been obtained from the Colorado River by means of pumping from the river itself. In point of time, this diversion was commenced and has been in constant use from a date which preceded any activity on the Colorado River by the United States, the Colorado River compact and all other statutory enactments involving the Colorado River system.

With the construction of Hoover Dam, Davis Dam, Parker Dam, Imperial Dam, and Laguna Dam, the large flows of the Colorado River were contained and the water placed in storage reservoirs. These activities of the United States resulted in major changes in gradient of the Colorado River in various sections of its channel. The dams also had the effect of reducing the large seasonal flows of the river which used to scour its bed and move voluminous quantities of silt into the Gulf of Lower California.

Another activity of the United States has brought about even greater changes in the channel of the Colorado River at the point of diversion of Yuma's water supply. Imperial Dam was constructed in 1937 at a point a few miles upstream from the city of Yuma. The purpose of the dam was to divert water of the Colorado for all of the irrigation uses from the All-American Canal as well as all of the projects in southern Arizona. As a part of the works of Imperial Dam, large desilting facilities were constructed. They were designed to remove most of the silt from the many millions of acre-feet diverted at that structure each year. The operation of the desilting works is such that all of the silt from these large desilting works is dumped back into the Colorado River channel just below Imperial Dam and just upstream from the city of Yuma. There is not now, and has not been for several years, sufficient water released by the United States, from the storage reservoirs to move all of the silt deposited in the river from Imperial Dam down past the intake of the city of Yuma's water supply.

The result of these activities of the United States has been to cause the river to deposit large amounts of silt in the river without providing any means of moving silt downstream. In turn, these large amounts of silt have accumulated along the Arizona side of the river at the city's water intake, thereby diverting the flow of the river to the opposite side of the river channel. The effect is to create "sand bars," which in turn act as a dam to keep the river flow away from the city's intake. The silt accumulations keep the water away from the city's intake. Based on projected needs and projected flows of the river, Yuma's water requirements will exceed the availability of water flowing past the city's intake because of the silt condition in the almost immediate future. Under present conditions the silt deposits deflect an estimated 95 to 98 percent of the flow of river to the opposite side of the stream.

During the past few months emergency hand labor has had to be used to make channels, or small canals through the large deposits of silt. These small channels were used to move water through the sand bar to the city's intake point on the river. Again because of the fluctuating flows, due to activities of the United States in operation of the dams, these temporary channels would be destroyed and completely filled with sand, requiring immediate alteration by the water utility personnel. This is costing our area several thousand dollars per year and is no solution to the problem created by the United States.

RESPONSIBILITY OF THE UNITED STATES

As stated above, the diversion from the Colorado River at the present point of diversion began in 1893. This usage has continued without interruption for the ensuing 64 years. Activities of the United States upstream are impairing and preventing this diversion which has so long existed. If the situation is not corrected immediately, and a public health problem should arise, or a disastrous fire should occur, it would appear that the United States might have extensive legal liability.

LEGAL AUTHORITY OF THE UNITED STATES TO CORRECT PROBLEM

There is now, and has been for many years, ample legal authority by act of Congress for the United States to correct the problem outlined above. The Colorado River Front and Levee System Act (June 28, 1946, 60 Stat. 338) specifically provides "for the purpose of controlling the flood, improving navigation, and regulating the flow of the Colorado River, there is hereby authorized to be appropriated * * * such sums as may be necessary, to be spent by the Bureau of Reclamation under the direction of the Secretary of the Interior, to defray the cost of * * * (c) controlling said river and improving, modifying, straightening, and rectifying the channel thereof;".

REMEDIAL FACILITIES

Facilities to improve and rectify the channel of the Colorado River, as authorized by the statute set out above, are needed urgently to correct the problem. The Chief Engineer Office of the Bureau of Reclamation has studied the problem and made a cost estimate of the remedial channel work which must be done. The Chief of the Irrigation Division of the Bureau advises that the estimated cost of the remedial work is $50,000. It includes the dredging of a channel through the silt accumulation, construction of a rail and wire deflection wall, and doing rock riprapping as needed on the riverbank.

The Senate Interior and Insular Affairs Committee has found that a serious emergency problem does exist; that there is a responsibility of the United States to correct the problem; that there is legal authority in the Colorado River Front and Levee System Act, authorizing the United States to correct it. Therefore, in behalf of the city of Yuma, we earnestly beseech you to provide the necessary appropriation of $50,000 and request the Secretary of the Interior to perform the necessary remedial work.

DOMESTIC WATER SUPPLY FOR CITY OF YUMA

Mr. MANSFIELD. And I will very briefly highlight it for you.

My purpose in being here today is to call to the attention of the committee a problem which has come up concerning the domestic water supply of the city of Yuma, which is in a sense an emergency problem, and for that reason one which has not been reflected in the budget which was before the House.

Earlier this year the problem was considered by the Senate Interior and Insular Affairs Committee and, as a result of their consideration of it, they took action by means of a formal resolution. I understand that that resolution has been officially transmitted to this committee, and perhaps it will be made a part of the record here today.

Chairman HAYDEN. It has been made a part of the record.

Mr. MANSFIELD. With that, then, I will not read into the record the resolution itself.

The problem, briefly, is this: the city of Yuma, Ariz., has since the time it was founded, long prior to 1893 used the Colorado River as its sole source of domestic water supply. Since 1893 they have diverted their domestic water supply from the same point on the river. Since that time, of course, there has been built upstream Boulder Dam, Davis Dam, Parker Dam, and all of the other works on the river.

Of particular importance, however, is Imperial Dam, which is constructed on the river approximately 12 miles upstream from the diversion point for the city of Yuma.

The effect, of course, of all these dams first of all is to store the large seasonal flows of the Colorado River. In that way the river has been harnessed.

Of course, we are in complete agreement and that was something that should have been done. When you do those things to a river, it has other effects.

In our case, for example, the harnessing of the river has, of course, cut down the large flows each spring. Those flows in turn used to sluice, clean out the river channel, and move large quantities of silt downstream.

Then coupled with the operation at Imperial Dam, all the water for Imperial Valley and our western part of Arizona is diverted at that dam and as part of the work the water is desilted each year.

At the present time there is approximately an excess of 4 million acre-feet diverted there each year. The silt is taken out of the water and dumped back into the river. And again we say, of course, that is a necessary part of the agricultural operation.

However, because of the low flows of the river, there has not been adequate water in the stream to flush or sluice the silt down the stream past the city's intake. So the result has been that these large quantities of silt have accumulated around the intake. We feel that where we were on the stream and using that as a source of supply since 1893 that the responsibility of correcting that condition rests on the shoulders of the United States.

Chairman HAYDEN. I regret to say that I must interrupt this hearing for a few moments.

I am notified that the Vice President will not be present to open the Senate and I will go up to do it.

(Thereupon, there was a brief recess.)

Chairman HAYDEN. I want to say to Mr. Mansfield that Senator Mansfield took my place in the chair.

You may proceed, Mr. Mansfield.

Mr. MANSFIELD. To pick up again where I left off, Mr. Chairman, I would like to go back to the point at which I left, and that is that there is not only a responsibility of the United States to correct the problem which exists but there is also legal authority for the United States to do so by virtue of an act of Congress that was passed on June 28, 1946.

REMEDIAL WORK IN CHANNEL

Under the Colorado River Front and Levee System Act there is legal authority for the United States to perform some remedial work in the channel which will correct the problem.

At the request of the people involved and the committee, the chief of the Irrigation Division of the Bureau of Reclamation has advised that the Chief Engineer's Office of the Bureau of Reclamation has made an estimate that for $50,000 remedial work could be performed in the channel which would correct the situation as it now exists.

It would include the dredging of the channel through the silt accumulation, also construction of rail and wire deflection wall and doing some rock riprapping as needed on the riverbank.

We recognize that in times of high flood that the rail and wire deflection wall might run out, but with the history we have coupled with the work done on the river, we do not anticipate that kind of condition.

To briefly summarize our statement, we sincerely request that the committee in pursuance to the resolution passed by the Senate Interior and Insular Affairs Committee request the Secretary of the Interior to perform this remedial work under the Colorado River Front and Levee System Act and that there be provided the necessary $50,000 with which to accomplish that work.

If we do not get this done the entire domestic water supply of the city of Yuma, some 32,000 people, would be endangered.

Chairman HAYDEN. Now, as I understand it, money has been expended under this same authority of law for dredging the Colorado River.

Mr. MANSFIELD. Yes, sir.

Chairman HAYDEN. The city of Needles in California was threatened with being flooded out.

Mr. MANSFIELD. Yes, sir.

Chairman HAYDEN. And work has also been done in connection with the Palo Verde Irrigation District.

Mr. MANSFIELD. Yes, sir. And also work has been done in the section of the river just about 1 mile upstream from the city of Yuma, intake; it was done on a limited scale, but some work has been done.

Chairman HAYDEN. I assume these matters are mentioned in your brief.

Mr. MANSFIELD. Yes, sir.

Chairman HAYDEN. I thank you.

Mr. MANSFIELD. Thank you very much.

STATEMENT OF E. W. RISING, REPRESENTING THE STATE WATER CONSERVATION BOARD OF MONTANA, ARIZONA INTERSTATE STREAM COMMISSION, AND THE GUFFEY ASSOCIATION OF IDAHO

PREPARED STATEMENT

Chairman HAYDEN. Mr. Rising.

Mr. RISING. Thank you, Senator.

Chairman HAYDEN. Your complete statement will be included in the record, Mr. Rising.

(The statement referred to follows:)

Mr. Chairman, I greatly appreciate the privilege of appearing before your committee this morning as the representative of the State Water Conservation Board of Montana, of which our Governor is the chairman, the Interstate Stream Commission of Arizona, and the Guffey Association of Idaho.

First, I ask that my statement of May 17, 1957, pages 720 to 725, Part 1, Testimony of Interested Organizations and Individuals, hearing before the Subcommittee on Appropriations, House of Representatives, be considered as a part of my statement today.

In my statement before the House committee, I supported budget items, and we have been given approval of amounts in H. R. 8090, as follows:

Project or unit	Budget item	Amount allowed in H. R. 8090
Helena Valley, Mont	$4,500,000	$4,500,000
Fort Peck transmission, Montana	654,000	645,000
Fort Peck powerplant, Montana	3,000,000	3,000,000
Painted Rock, Ariz	3,165,000	2,841,000
Gila, Ariz	869,000	869,000
Whitlow Ranch, Ariz	147,000	147,000

The action of the House on the items in the table above is satisfactory and we urge this committee to approve the amounts as passed by the House so that necessary funds will be available to continue the planning and construction of these projects during fiscal year 1958.

Mr. Chairman, I wish now to refer to the investigation items in the budget for the Bureau of Reclamation as follows:

Item	Budget recommendation	Amount approved by House in H. R. 8090
General investigations	$5,932,000	$4,500,000
Missouri River Basin investigations	3,000,000	2,000,000
Total	8,932,000	6,500,000

The House has made a cut of 27 percent in the Bureau of Budget approved amounts for investigations which will, if approved by the Senate, make it necessary for the Bureau of Reclamation to substantially reduce its project investigations staff and postpone indefinitely the completion of many project reports.

I have in mind a few examples: The Guffey unit in Idaho, a project which is urgently needed for the irrigation of approximately 130,000 acres of land, drainage of lands of an existing project, and generation of power. A project which will have a benefit-cost ratio of 1.5 to 1 and will be fully reimbursable.

Another: the East Bench unit of the Missouri River Basin project where a section of the proposed new Federal interstate highway crosses a reservoir site and where a decision relative to relocation of this new highway and a section of Union Pacific Railroad is involved. Unless funds are available to complete the Bureau of Reclamation study promptly, this will lead to increased costs for moving a new highway.

Bureau of Reclamation witnesses appearing before the House Subcommittee on Public Works Appropriations for 1958 furnished project-by-project figures making up the budget item of $5,932,000 for general investigations, together with complete justification for each item. On page 257, part 1, of the House hearings will be found an item of $264,666 for the Snake River project, Idaho. This item is urgently needed for completion of report on the Guffey unit scheduled for the fall of 1958. Reduction of this item would mean a delay of another year in completion of the report and also delaying for a year the opportunity to present legislation to the Congress for the authorization of this unit.

On pages 982 and 983, part 1, of the House hearings, will be found a table giving the items making up request of $3 million for investigations in the Missouri River Basin. The House committee in its report has placed a limit of $500,000 to be spent on the Garrison unit which may be considered as reducing the budget item by $281,000. The House committee, however, have made no explanation as to why more than $281,000 has been deducted from the investigations item of the Missouri River Basin.

Mr. Chairman, I urge that this committee give earnest consideration to the matter of providing adequate funds for investigations by the Bureau of Reclamation in the Missouri River Basin as well as for other regions of the Bureau of Reclamation.

Notwithstanding the reduction in the value of the dollar, the amount appropriated for construction of reclamation and other water-resource projects is not being increased by Congress. This, I feel, is a very shortsighted policy, as was

so well said in a statement (copy attached) recently made by Hon. Lyndon Johnson, which I adopt and ask to have included as part of my statement showing the need for a more liberal policy in making appropriations for water resource projects for both the Bureau of Reclamation and Corps of Engineers.

Mr. Chairman, in conclusion, may I thank you for the opportunity of appearing before this committee today and I again particularly urge an increase in funds recommended for appropriation for investigations by the Bureau of Reclamation over the amount allowed by the House. A small reduction of about 7 percent similar to that made for construction items may be justified but certainly a 27-percent cut is not justified.

STATEMENT OF HON. LYNDON JOHNSON, UNITED STATES SENATE

(P. 8286, Congressional Record, June 17, 1958)

FLOOD CONTROL AND DEVELOPMENT OF WATER RESOURCES

Mr. JOHNSON of Texas. Mr. President, in all its national history the United States has spent a total of $16.8 billion in Federal funds for flood control and development of our water resources.

Since the end of World War II, the United States has spent approximately $60 bililon for aid to other countries.

I do not state that these latter expenditures were not wise and necessary. I do say that the former expenditures—those for water projects in our own country—constitute a shamefully small investment for this purpose.

Ours is a growing population. Ours is a dynamic, expanding economy. Our investments for the control of floods and the development of water resources have lagged far behind the increase in population and the expansion of the economy.

Between 1950 and 1956, our population increased by 11.6 percent and the national income increased by 42.6 percent. But Federal expenditures for water projects actually were 14.9 percent less in 1956 than in 1950.

Mr. President, that decrease does not make sense to me. I do not see any justification for it. At a time when, by every sound standard, we should have been doing more—we have been doing less. And our failure to do more rather than less has been costly in lost opportunities, in heavy flood damage, in loss of human life.

Water, for consumption by human beings, for use by industry, for agricultural irrigation, for generation of power, is our No. 1 resource in this country. Also, control of water, when the rains come too fast and too heavily, often becomes for a time our No. 1 problem. We must develop that resource wisely and well. We must meet that problem soundly and efficiently. Mr. President, Congress has a constitutional responsibility for the national land and water resources program. It is a responsibility we must accept and fulfill.

GENERAL STATEMENT

Mr. RISING. Mr. Chairman, I will be very brief.

I first want to state my name is E. W. Rising and I represent the State Water Conservation Board of Montana, the Arizona Interstate Stream Commission, and the Guffey Association of Idaho.

I feel it a great honor to appear before this committee this morning as a representative particularly of the State of Arizona.

I have no regret or criticism to offer regarding the way that the House Committee on Appropriations has treated us on construction items. And we ask, Mr. Chairman, that your committee concur in the action taken by the House in recommendation for appropriation the items as are now in the bill.

Chairman HAYDEN. That is the Helena Valley, Mont.; Fort Peck transmission, Montana; Fort Peck powerplant, Montana. Painted Rock, Ariz.; Gila, Ariz.; and Whitlow Ranch, Arizona.

Mr. RISING. That is correct, Mr. Chairman.

FUNDS FOR GENERAL INVESTIGATIONS

Our principal reason for appearing before you this morning is in connection with the investigations funds being furnished the Bureau of Reclamation. I concur in the statement made by Mr. Welsh and again call attention to the fact that the budget recommendation for general investigations and for the Missouri River Basin investigation was $8,932,000 and only $6,500,000 has been allowed which is a 27 percent cut and means, of course, that the investigations staff of the Bureau of Reclamation will have to be reduced and men released will have to go elsewhere for employment. When the Bureau needs them again it will be difficult to obtain replacements.

GUFFEY UNIT

I want to mention two examples. One is a project in Idaho called the Guffey unit, which will bring under irrigation 130,000 acres of land with a benefit-cost ratio of 1.5 to 1.

The Bureau scheduled the completion of their report for November 1958.

If we cut down on the amount of investigations funds it will delay the completion for a year and also delay the presenting of a bill to authorize the project.

EAST BENCH UNIT

We have another example up in Montana called the East Bench unit, where the Bureau is planning a project that will bring under irrigation, something like 50,000 acres of land, and it happens there is a reservoir in connection with that project, and the first section of new Federal interstate highway to be built in Montana, with the proposed route, directly across the reservoir site and unless the Bureau has sufficient funds to complete its investigation so it can advise the highway department where it will have to move its highway and, by the way, when we move the highway we will also have to move a section of the Union Pacific Railroad—it will mean delay in building the highway or if the highway is built as now proposed, would mean an additional cost to the Government when the irrigation project is constructed to move both new highway and the Union Pacific Railroad.

GARRISON PROJECT

The House in connection with its report on the investigations funds, for the Missouri River Basin, reduced the funds for the Garrison project by some $281,000. They did not make any explanation of why they made a reduction of over $700,000 additional, a total cut in the investigations funds for the Missouri River Basin of a million dollars.

Notwithstanding the reduced value of the dollar the amount appropriated for reclamation continues to be reduced. We feel that this is a very shortsighted policy and that it was well stated by Senator Lyndon Johnson a few days ago before the Senate in which he called attention to the fact that, going into our history of the United States, only $16.8 billion in Federal funds has been expended for flood control

and development of water resource projects, while since World War II the United States has spent over $60 billion in foreign aid. No one is taking an exception to the amount spent for foreign aid, but it seems to be a very ridiculous situation when we cannot spend in our own entire history only $16 billion for water resource development.

Federal expenditures for water projects actually have been 14.9 percent less in 1956 than they were in 1950. Water for consumption of human beings, for use in industry, agriculture, generation of power is our No. 1 resource.

Mr. Chairman, I certainly appreciate the opportunity of appearing for you and presenting this statement. May I thank you for the time that I have been given this morning and I again particularly urge increase in funds recommended for investigations by the Bureau of Reclamation over the amount allowed by the House. A small reduction of something like 7 percent might be justified as was applied to construction items, but certainly we are not justified in accepting a cut of 27 percent in the general investigations' funds.

Chairman HAYDEN. We thank you for your statement.

Mr. RISING. Thank you, Mr. Chairman.

STATEMENT OF ROBERT L. McCARTY, TOWER BUILDING, WASHINGTON, D. C., ACCOMPANIED BY WILLIAM L. BERRY, CHIEF OF THE RESOURCES PLANNING DIVISION, DEPARTMENT OF WATER RESOURCES, STATE OF CALIFORNIA

CENTRAL VALLEY PROJECT

Chairman HAYDEN. Mr. McCarty and Mr. Berry.

Mr. MCCARTY. Mr. Chairman.

I am Robert L. McCarty of the law firm of Ely, McCarty & Duncan, Tower Building, Washington, D. C. We are special counsel for the department of water resources of the State of California, the agency responsible to the State for activities on the Central Valley project, among many other assignments.

I am accompanied by Mr. William L. Berry, who is chief of the resources planning division of that California agency.

I know the Chair is entirely familiar with the fact that for years past the water project authority of the State had the responsibility under the 1933 act of the California Legislature to construct and follow the progress of the Central Valley project.

As you know, of course, it became a Federal project, but the water project authority nonetheless had the responsibility for the State of observing progress, and making studies and recommendations.

The water project authority now by reason of the act of the legislature effective last summer is no longer in existence. Substantially all of the State water agencies in California are now embraced within the department of water resources.

Now Mr. Berry will present their estimates for the State for the proper economic furtherance of the Central Valley project.

Chairman HAYDEN. Go ahead.

Mr. BERRY. Mr. Chairman, I am William L. Berry, chief of the division of resources planning of the California State Department of Water Resources.

As in previous years, the department of water resources has prepared a report setting forth the status, costs, and appropriations previously made for the Central Valley project, and recommending the amounts of money which could be appropriated for advantageous prosecution of the work during fiscal year 1958.

I would like to summarize the nature of the work called for in the report and leave a copy of the report itself for your files.

Chairman HAYDEN. We will be glad to have it.

Mr. BERRY. We recommend an appropriation of $29,130,000, which would permit (1) completion of construction of a number of irrigation distribution systems along the Friant-Kern Canal; (2) completion of the Corning Canal of the Sacramento Canal unit, (3) continued prosecution of major construction on the Trinity River division, (4) completion of a number of minor items of work throughout the project generally; and (5) the continuation of current cooperative studies regarding water rights along the Sacramento River.

As it is shown on pages 28–29 of our report, the total amount recommended of $29,130,000 is allocated as follows:

1. Trinity River division, $20 million;
2. Sacramento River division, Corning Canal, $2,200,000;
3. The American River division, Folsom Dam and Reservoir, $73,000; and general property, $40,000, or a total of $113,000;
4. Friant division, Friant-Kern Canal, $276,000; Friant-Kern distribution system, $6,090,000, or a total of $6,366,000, for the Friant division;
5. Project, general, water rights, Central Valley project $260,000; Central Valley waterfowl conservation, $186,000; and Central Valley radio network, $5,000 or a total of $451,000 for project-general.

In addition, the State of California recommends that funds in the amount of $11 million be made available to support construction of distribution systems under Public Law 130 in the Friant-Kern Canal service area. Construction of these distribution systems will permit the service areas to receive the project water which is already available through project works. The affected districts and the funds necessary are: Terra Bella Irrigation District, $3,400,000; Porterville Irrigation District, $2,300,000; and Saucelito Irrigation District, $5,400,000.

The recommendations we make for the Central Valley project are somewhat above funds which were presented in the budget, the chief differences being in the Trinity River division, Corning Canal, and the Friant system.

The Budget recommendations on the Central Valley project were reduced by House action by $2,268,000. In view of the fact that the budget amounts were already below the estimates we considered desirable, we hope very much that the Senate restores the funds cut by the House.

Thank you for the opportunity to be here today.

PREPARED STATEMENTS

Chairman HAYDEN. We enjoyed your statement, sir.

The prepared statements will be inserted in the record.

(The statements referred to follow:

STATEMENT OF ROBERT L. MCCARTY, IN BEHALF OF APPROPRIATIONS FOR THE CENTRAL VALLEY PROJECT, CALIFORNIA, FOR FISCAL YEAR 1958

I am Robert L. McCarty of the law firm of Ely, McCarty & Duncan, Tower Building, Washington, D. C. We are special counsel for the Department of Water Resources of the State of California, the agency responsible to the State for activities on the Central Valley project, among many other assignments.

I am accompanying William L. Berry, chief of the resources planning division of that California agency.

The department of water resources was established in the State government as of July 5, 1956, through an act of the California Legislature. Prior to that time and going back to 1933, Central Valley project matters had been the province of the water project authority for the State. That water project authority was established by the State legislature in 1933 to direct the construction of the Central Valley project as a State project. When Federal assistance in connection with proposed revenue bonds for the project was sought, PWA approval of the project scheme was received, but only upon construction as a Federal project by the Bureau of Reclamation, under the reclamation law.

This is the first time that a representative of the new department of water resources has appeared before you. Mr. Berry will present the views of the State on appropriations believed necessary to the proper continued economic development of the Central Valley project during fiscal year 1958.

STATEMENT OF WILLIAM L. BERRY, CHIEF OF THE DIVISION OF RESOURCES PLANNING OF THE CALIFORNIA DEPARTMENT OF WATER RESOURCES, WITH REFERENCE TO AN APPROPRIATION FOR THE CENTRAL VALLEY PROJECT OF CALIFORNIA FOR THE FISCAL YEAR 1958

I am William L. Berry, chief of the division of resources planning of the California State Department of Water Resources.

As in previous years, the department of water resources has prepared a report setting forth the status, costs, and appropriations previously made for the Central Valley project, and recommending the amounts of money which could be appropriated for advantageous prosecution of the work during fiscal year 1958. I would like to summarize the nature of the work called for in the report and leave a copy of the report itself for your files.

We recommend an appropriation of $29,130,000, which would permit: (1) Completion of construction of a number of irrigation distribution systems along the Friant-Kern Canal; (2) completion of the Corning Canal of the Sacramento Canal unit; (3) continued prosecution of major construction on the Trinity River division; (4) completion of a number of minor items of work throughout the project generally; and (5) the continuation of current cooperative studies regarding water rights along the Sacramento River.

As shown on pages 28 and 29 of our report, the total amount recommended is allocated as follows:

1. Trinity River division	$20, 000, 000
2. Sacramento River division: Corning Canal	2, 200, 000
3. American River division:	
Folsom Dam and Reservoir	73, 000
General property	40, 000
	113, 000
4. Friant division:	
Friant-Kern Canal	276, 000
Friant-Kern distribution system	6, 090, 000
	6, 366, 000
5. Project, general:	
Water rights, Central Valley project	260, 000
Central Valley waterfowl conservation	186, 000
Central Valley radio network	5, 000
	451, 000
Total	29, 130, 000

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In addition, the State of California recommends that funds in the amount of $11,100,000 be made available to support construction of distribution systems under Public Law 130 in the Friant-Kern Canal service area. Construction of these distribution systems will permit the service areas to receive the project water which is already available through project works. The affected districts and the funds necessary are: Terra Bella Irrigation District, $3,400,000; Porterville Irrigation District, $2,300,000 and Saucelito Irrigation District, $5,400,000.

The recommendations we make for the Central Valley project are somewhat above funds which were presented in the budget, the chief difference being in the Trinity River division, Corning Canal, and the Friant system.

The budget recommendations on the Central Valley project were reduced by House action by $2,268,000. In view of the fact that the budget amounts were already below the estimates we considered desirable, we hope very much that the Senate restores the funds cut by the House.

Thank you for the opportunity to be here today.

EAST BAY MUNICIPAL UTILITY DISTRICT, OAKLAND, CALIF.

STATEMENT OF ROBERT L. McCARTY, SPECIAL COUNSEL

PREPARED STATEMENT

Chairman HAYDEN. Do you have a statement, Mr. McCarty?

Mr. MCCARTY. Yes, Senator.

I would like, if I may, to submit the statement for the record and to summarize it very briefly.

Chairman HAYDEN. That may be done.

(The statement referred to follows:)

I am Robert L. McCarty, a member of the law firm of Ely, McCarty & Duncan with offices in the Tower Building, Washington, D. C. We are special counsel for the East Bay Municipal Utility District, Oakland, Calif., a publicly owned organization which delivers water to some 14 cities in the San Francisco East Bay area, ranging, north to south, from Richmond to San Leandro.

We oppose a proposal to divert water from the Contra Costa Canal, a feature of the Central Valley project in California, by means of the so-called Richmond conduit or aqueduct, planned to carry industrial water to the Southwest Contra Costa County Water District in Richmond, Calif. This district is located almost entirely within the present service area of the East Bay Municipal Utility District and the service this district proposes would be a duplication of some of East Bay's existing facilities in the Richmond area. We think that the use of Federal funds to build this project, thus supporting one public agency in competition with another public agency cannot be justified.

The specific language which concerns us appears in the budget in connection with Bureau of Reclamation construction funds, as follows:

"*Provided further*, That no part of this appropriation shall be available for other than the completion of field engineering, survey work, and preliminary designs of the Southwest Contra Costa County Water District system and no repayment contract shall be executed or construction begun until plans have been submitted to and approved by the Congress through its legislative and appropriation procedures, after submission of a report to the Congress by the Secretary of the Interior (1) on the cost and feasibility of said project, including the necessary distribution system and (2) on the rates required to be charged to the ultimate consumers:"

This problem started in 1951 when the Bureau of Reclamation requested funds with which to construct this project on a secretarial authorization. The language just quoted resulted, we understand, in order to permit the half-completed studies to be finished. We have appeared each year in support of the prohibition against construction without an act of Congress.

The feasibility report called for by the proviso just quoted was submitted by Bureau to the Speaker of the House in March of 1954. In addition, authorizing legislation was introduced in the 83d and 84th Congresses.

A report submitted by the Interior Department to the House Interior and Insular Affairs Committee on December 2, 1955, stated:

"It is (the Department's) general policy that, wherever local construction is possible, local interests should not look to the Federal Government for such works as are here involved. Our present purpose, therefore, is to furnish your committee with the factual data called for by appropriation act language in order to assist it in determining the course of conduct it may wish to follow in connection with the bill."

A Budget Bureau letter of March 11, 1954, referenced in the Interior letter report of December 2, 1955, contained the following:

"There is at present a water supply available for industrial, as well as domestic, purposes in the Richmond area. The East Bay Municipal Utility District, a publicly owned, nonprofit agency, has constructed major facilities for a supply of 30,080,000 cubic feet daily, of which the utility district estimates it is currently using 15,374,000 cubic feet daily. The unused supply of 14,706,000 cubic feet daily is nearly 5 times the capacity of the project system outlined above. The district officials state that this present excess capacity is fully adequate to meet the future industrial requirements of the Richmond area as well as other areas within the district. The East Bay Municipal Utility District states that in 30 years of its operation, $77 million in bonds have been voted by the people to pay for waterworks it has constructed or purchased. The utility district maintains it can furnish new industries with high-quality, treated, and filtered water through its system with adequate storage, pressure, and standby service at rates which have been decreasing more and more as the district's debt is retired. These rates, on a monthly rate schedule, as of September 1, 1953, were:

	Per 100 cubic feet
"For the first 3,300 cubic feet	$0. 20
For the next 30,000 cubic feet	. 18
For the next 300,000 cubic feet	. 12
For all over 333,300 cubic feet	. 09"

The Director of the Bureau of the Budget concluded that construction of the project with Federal funds:

"* * * would place the Federal Government in the position of competing with an already existing local enterprise which, with the presently constructed system, is capable of providing the required water supplies at an apparently reasonable price.

"Accordingly, you are advised that while there would be no objection to the submission to the committee of your proposed noncommital report on H. R. 3691, in the light of the above comments the Bureau of the Budget would not recommend its enactment at this time. It will be appreciated if you will furnish a copy of this letter with the report you submit to the Congress."

The Interior Department letter report of December 2, 1955, also shows a cost estimate, as of January 1953, of over $6 million and points out several areas of additional cost on which no estimates were offered, as follows:

"The report to the Congress made pursuant to a provision in the Interior Department Appropriation Act, 1954, identical to that quoted above indicates that the construction cost involved in bringing water from the Contra Costa Canal to the head of a distribution system to be locally constructed would be about $6,130,000 in terms of prices prevailing in January 1953. To amortize this investment with interest at the rate of 2½ percent over 40 years and to cover a $10 per acre-foot charge for water alongside the Contra Costa Canal would require payment by the district of approximately 8.96 cents per 1,000 gallons at the head of its distribution system. The added cost of distribution would bring the average price of raw water to the consumer to an average of about 11.69 cents per 1,000 gallons. These estimates do not include any allowance for special taxes presently being levied by the East Bay Municipal Utility District or any assessments that may be levied in the future by the Southwest Contra Costa County Water District. They likewise do not include any costs for boosting of pressures, water treatment that may be found necessary by certain industries to meet specialized processing requirements, or costs for standby or peaking service from local facilities."

We think it clear from these reports that the cost of water to significant users of the proposed aqueduct would be at least as much and probably more than charges for water now received by the same users from the East Bay Municipal Utility District. We do not see how a duplicating system can be justified on this basis alone. When there is added to this the plain fact that Government financing and construction of this project would be supporting one publicly

owned agency in competition with another, we say the proposal is utterly indefensible.

We think it time to clear the air. The report called for by the language in the budget was submitted to you 3 years ago. There is no need to continue that open-ended language. No purpose is served by continuing this project as an annual candidate for a feasibility report. We respectfully urge your consideration and adoption of the following in lieu of the language in the budget.

"*Provided further*, That no funds appropriated by this or any previous act shall be used for the construction of an aqueduct or extension of the Contra Costa Canal to the Southwest Contra Costa County Water District or city of Richmond, Calif.; and no contract shall be negotiated by the United States or any officer thereof for the construction or financing of such aqueduct or canal unless and until the construction of the same shall have been specifically authorized by act of Congress."

This language would recognize that the report called for has been received by Congress and would continue the prohibition against construction or contracting to construct in the absence of a specific project authorization from Congress.

CONTRA COSTA CANAL

Mr. McCARTY. Mr. Chairman, I know this is an item with which you are very familiar. It speaks to language in the construction and rehabilitation section of the reclamation appropriations, that proviso which states that no funds shall be expended other than for the planning of a conduit from the Contra Costa Canal to the city of Richmond.

I think in previous appearances before you, a map has been exhibited or rather a schematic drawing of the area.

I would like to show you that, if I may, once again, simply to refresh you on the area involved. That cross-hatched section at the far left is the Southwest Contra Costa County Water District. It is not too evident from the drawing itself, but the district is actually wholly within the confines of the East Bay Municipal Utility District.

Other portions of the drawing show the proposed extension by conduit from the Contra Costa Canal.

The reason the East Bay Municipal Utility District is disturbed is that they are a public agency established under the laws of the State, as is the southwest district which is essentially nonoperative.

The East Bay people do not feel this conduit should be constructed by the Federal Government, using Federal funds, thus favoring one public agency in competition with another.

The history of the proposition, very briefly, is that language of the act for the past several years has called for a report from the Bureau of Reclamation in connection with this proposal. That report was submitted in 1954 and is a rather substantial document. Budget Bureau reports on the proposal have been adverse. Nonetheless the language of the appropriations act continues the same as though the report had never been submitted.

We think that the portion of the language calling for a report is presently objectionable in that it would permit the expenditure of funds, although we concede that none have been expended since 1954, and the preparation of a report which has already been prepared and submitted.

PROPOSED LANGUAGE PROVISION

In brief, we believe that as a perfecting matter, if nothing else, the language of the bill before you should be amended, and we propose the following in lieu of what is there now:

Provided further, That no funds appropriated by this or any previous act shall be used for the construction of an aqueduct or extension of the Contra Costa Canal to the Southwest Contra Costa County Water District or city of Richmond, Calif.; and no contract shall be negotiated by the United States or any officer thereof for the construction or financing of such aqueduct or canal unless and until the construction of the same shall have been specifically authorized by act of Congress.

That continues the prohibition against any activity on it. It simply recognizes that the report previously called for has been submitted.

We really think it is time to clear the air in this situation since it was 3 years ago now that the report itself was submitted.

Chairman HAYDEN. Nevertheless, if the bill remains as it came from the House, you would be satisfied, would you not, in that sense because it does no harm to you people?

Mr. MCCARTY. That is correct, Senator, unless of course it was interpreted, as it can be, that funds were available to continue planning and design. We do not think that is at all necessary.

TELEGRAM

I would like also to present the regrets of Mr. John McFarland, general manager of the district, who has appeared before you on previous occasions, that he could not be here today. He sent a telegram and asked that I offer it for the record, which generally supports the statement we have made.

Chairman HAYDEN. That may be done.

(The information referred to follows:)

OAKLAND, CALIF., *June 12, 1957.*

ROBERT MCCARTY,
Ely, McCarty, Duncan & Wheatley,
Tower Building, Washington, D. C.:

Re your telegram. Please express regrets to Senate committee.

Unable to appear personally June 21 re opposition to SWCCCWD project.

Please reaffirm for us to Senate committee our opposition to SWCCCWD project on grounds of duplication.

Absence of necessity and fact that project is contrary to national policy urge language in appropriation bill that will definitely prohibit expenditure of funds by Reclamation Bureau for this unnecessary project.

EAST BAY MUNICIPAL UTILITY DISTRICT.
JOHN W. MCFARLAND.

Mr. MCCARTY. Thank you very much.

SOUTHERN SAN JOAQUIN MUNICIPAL UTILITY DISTRICT

STATEMENT OF C. EMERSON DUNCAN II, SPECIAL COUNSEL, ACCOMPANIED BY MILO R. MARSHALL, MEMBER, BOARD OF DIRECTORS

GENERAL STATEMENT

Chairman HAYDEN. Mr. Duncan.

Mr. DUNCAN. Mr. Chairman, I would like to thank you at the outset for providing the opportunity on very short notice for representatives of the Southern San Joaquin Municipal Utility District to appear here.

My name is C. Emerson Duncan II, and I am a member of the firm of Ely, McCarty & Duncan, with offices in the Tower Building, Washington, D. C. We are special counsel for the Southern San Joaquin Municipal Utility District, Delano, Calif.

I am accompanied here today by Mr. Milo R. Marshall, a member of the board of directors of the district and Mr. Merritt G. Wojta, secretary and general manager of the district.

FRIANT-KERN DISTRIBUTION SYSTEM

The Bureau of Reclamation in its budget for the Friant-Kern distribution system, has recommended an expenditure of $888,000 to provide for construction of extensions to the existing southern San Joaquin distribution system.

I have a map here, Senator Hayden, of the system, and the area enclosed in the red lines is the area to be covered by these extensions.

A repayment contract for the proposed extensions was approved by the district in June 1956, but because of the language present in the Interior Department Appropriation Act of 1954 (act of July 31, 1953), the Bureau was unable to recommend to the Secretary of the Interior that the lands be classified as altogether irrigable, and no contract has been entered into on the part of the United States up to this time.

The Bureau witnesses before the House committee testified that the district was fully capable of pledging all of its lands to carry out the contract, since of the 62,000 acres within the district, only 3 percent will be covered by the extensions. The board of directors of the district, by resolution, have agreed to accept this responsibility.

The district is financially able to do so.

The House committee nevertheless failed to give its approval to the project.

In the present case any risk of a writeoff request being presented to Congress is removed by reason of the district's acceptance of full repayment responsibility. In view of this, we think that there is nothing speculative whatsoever in the Government's making funds available for the construction of these extensions.

The original authorization for the Southern San Joaquin Municipal Utility District system was approximately $9,959,000, of which around $8,500,000 has been expended. The $888,000 required to construct the extensions comes well within the amount remaining as unexpended.

Capacity was provided for the works when the system was built and is there to carry water to the 4,100 acres in question, provided that the extensions to the laterals can be constructed.

I would like Mr. Marshall to make his statement, Senator.

He is a practical farmer in the area, and he knows the land very well, and I think you will find what he has to say to be of interest.

Chairman HAYDEN. We will be pleased to hear from you.

STATEMENT OF MILO R. MARSHALL

Mr. MARSHALL. First of all, thank you for the opportunity of appearing before the committee.

I am Milo R. Marshall, of McFarland, Calif. I am a former president of the board of directors of the Southern San Joaquin Municipal Utility District in California. I am still a member of the board and have been so since its organization in 1935. I have lived in the district since 1912, and I own 160 acres of land in the district.

I appear here to support the budget item for the Friant-Kern distribution system of the Central Valley project submitted by the Bureau of Reclamation to provide funds for the construction of extensions to the distribution system of the Southern San Joaquin Municipal Utility District.

My principal purpose in appearing before the committee is to assure its members that the district is unanimous in its desire to proceed with the construction of these extensions.

The problem is that the Interior Department Appropriation Act for 1954, provides that no part of this or any other appropriation available for construction shall be available unless the Secretary of interior shall certify to Congress that adequate soils surveys and land classification studies have been made and that the lands are susceptible to irrigated crops or that successful irrigability has been demonstrated in practice. Approximately 47 percent of the lands under these proposed extensions have been classified as nonirrigable or class 6 lands by the Bureau of Reclamation.

There are now approximately 1,600 acres under cultivation in the service area of the extensions. We find by comparing the soils surveys conducted in 1942 by the United States Department of Agriculture and the State of California, prior to the Bureau of Reclamation soil survey, that a majority of these lands now under cultivation as well as other lands in the extension areas were considered class 5 or 6 lands fit only for pasture or nonagriculture use.

These same lands are now producing potatoes, cotton, alfalfa, barley, and milo maze and have been classified as class 4 lands or better in the latest Bureau of Reclamation soil survey of 1956.

Lands that have been classified as nonirrigable have been questioned by farmers in the area. It is the opinion of this group of farmers that after several irrigations and with leaching of the salts, these lands can and have been changed from nonproductive to productive land.

CHARACTER OF SOIL

Chairman HAYDEN. What was the original complaint about the character of the soil?

Mr. MARSHALL. We have approximately 2 feet of alkali on this No. 6 land.

Chairman HAYDEN. Two feet of what?

Mr. MARSHALL. Of alkali.

Chairman Hayden. Oh, I see.

Mr. MARSHALL. It is a kind of a——

Chairman HAYDEN. Can you wash it out?

Mr. MARSHALL. You can wash it out. That is what has been done in several areas of the district, and some of the best land in the district is land from which salt has been leached or washed out. It is considered the best in the district.

Chairman HAYDEN. Well, how do you do washing, by ponding the ground?

Mr. MARSHALL. Yes. First you put gypsum on it. This gypsum can be bought for about $4 a ton. You distribute about 5 tons to the acre for about 2 years or possibly 3 years and then you can cut that down some and raise what crops you can on it, alfalfa, sugar beets, whatever it might be. And in a period of 5 or 6 years it really pays.

A man usually needs to be able to finance himself for about 3 years. Beyond that it takes care of itself.

Chairman HAYDEN. I have known of instances in the Salt River Valley where land was heavy alkali, but there was below the gravel beds and by putting on a pond of water——

Mr. MARSHALL. That is right.

Chairman HAYDEN. And having it soak through, you would get the alkali out.

Mr. MARSHALL. That is right.

Chairman HAYDEN. They did not apply gypsum then. They did not know about it.

Mr. MARSHALL. That is a quicker process. It is better to use gypsum because water goes out more quickly.

REMOVAL OF ALKALI

Chairman HAYDEN. Is the alkali removed from the soil by moving down and draining out or do you have to fill the pond over the area of water and run that off and then do it again?

Mr. MARSHALL. No, it just drains out as you use it. As you put the water on it drains out.

Chairman HAYDEN. It goes down below.

Mr. MARSHALL. That is right.

Chairman HAYDEN. And into the subsoil.

Mr. MARSHALL. That is right.

Chairman HAYDEN. It has actually been demonstrated that that can be done.

Mr. MARSHALL. Oh, yes. It has been done and we have some of the best production acres in the country there where that same thing has been done.

Chairman HAYDEN. My next question is, Do you have enough people who can stand that expense and failure to produce crops for the first few years without going broke?

VALUE OF LAND PER ACRE

Mr. MARSHALL. We have no doubt of that because we have a very good district there. I would say most of the land in our district outside of these few acres would probably average between $1,000 and $1,200 an acre if it were sold. I mean there is a lot of it being sold at that price now.

Chairman HAYDEN. Does the district as a whole agree to pay to the Government the annual increments of charges?

Mr. MARSHALL. It is absolutely unanimous.

Chairman HAYDEN. Then, what I mean is, if the Government had to depend on what one man would pay and another man would pay and another man would pay individually, that would be one way of getting this money back.

Mr. MARSHALL. No.

Chairman HAYDEN. The other way, the district assumes the entire responsibility with the total cost of reimbursing the Government.

Mr. MARSHALL. The board made a resolution to that effect and the Bureau of Reclamation has that resolution in their files.

Chairman HAYDEN. Originally in the Salt River project in California each landowner contracted to pay the Government. Subsequently, the district assumed the responsibility of making payments, which they do. If some individual happens to be delinquent the Government does not lose its money.

Mr. MARSHALL. No.

Chairman HAYDEN. That is the situation that you have.

Mr. MARSHALL. Yes. The district as a whole pays it back, and I think I have kind of a financial part of it that I will tell you about in a minute.

COMMUNICATIONS

With your permission, and in the interest of saving time, I would like to request that several letters from farmers presently actively farming lands within the areas to be served by the extensions, be inserted in the record and made a part of this statement.

These letters will amply demonstrate the attitude of the practical farmer.

Chairman HAYDEN. That may be done.

(The letters referred to follow:)

McFARLAND, CALIF., *June 17, 1957.*

BOARD OF DIRECTORS,
Delano, Calif.

GENTLEMEN: My wife and I now own 320 acres within the area of the proposed extension to laterals 119.6 W. and 122.5 W. At present we are farming only 240 acres because of lack of water.

Having lived and farmed within the area of the Southern San Joaquin Municipal Utility District, I feel that the classification of lands within the extension area are far too conservative. I can remember when my family first arrived in the Delano area and settled upon land that was considered not farmable because of alkali content, caused by a high ground-water table. Now that the ground-water table has dropped 125 feet, this land has been developed to the point where it is considered among the best in the Delano area.

I believe that those of us farming in the area of the extensions are entitled to the same consideration that was given the rest of the district by the construction of their distribution system. If a distribution system is not constructed in the immediate future, we shall be forced to drill costly water wells which will cause further lowering of the water table.

In closing, I urge that this matter be taken up at your earliest convenience.

Yours very truly,

LIDO SANDRINI.

McFARLAND, CALIF., *June 17, 1957.*

BOARD OF DIRECTORS,
Delano, Calif.

GENTLEMEN: I am farming 180 acres in section 18, T. 25 S., R. 25 E., which is under the service area of the proposed extensions.

Fortunately, I have been able to use canal water by the courtesy of my neighbor of letting me have an open ditch of one-half mile in length across his land. My well alone would not have allowed me to develop this much acreage.

While I have and am receiving canal water, the method of transportation through open ditch and through the courtesy of my neighbor is unsatisfactory. I again urge that extensions be constructed as speedily as possible.

My land when purchased in 1950, was considered very poor land for farming. Last year I made better than 2 bales to the acre in cotton and 9 tons of alfalfa to the acre. All this land can be reclaimed, provided there is plenty of water.

Very truly yours,

VERNON W. KRAFT.

DELANO, CALIF., *June 17, 1957.*

BOARD OF DIRECTORS,
Delano, Calif.

GENTLEMEN: At the present I am farming 240 acres in the district. In 1953 I acquired 80 acres in sec. 7, T. 25 S., R. 25 E., which is within the service area of proposed extensions and at present is considered nonirrigable by the Bureau of Reclamation.

This land has shown good progress in the last 4 years and I am confident that with a supply of canal water more progress can be made than in the past. I have had particularly good production with alfalfa, barley, and milo, and in comparison with my 160 acres of good land, I have obtained approximately two-thirds the production of the good land.

I can remember some 20 years ago when many parcels of land within the district were considered at that time not worth farming because of the alkali condition. These lands today are considered of the best in the district. It is my belief that eventually all land within the service area of extensions will be developed and brought under production, provided canal water is brought to the area.

It is my understanding that the district's water contract provides water for extension service area. Since, at present we are paying for a distribution system for the rest of the district, I believe that it is only just that those of us farming in the area of the extension should also be provided with a distribution system so that we may use the canal water that has been allotted for our area.

Yours very truly,

EDWARD KRAFT.

WATER SERVICE CONTRACT

Mr. MARSHALL. The district has a water service contract with the United States which provides water for the entire district including the 4,000-acre service area of the proposed extensions. The district's construction contract with the United States obligates all lands within the district for repayment of the present distribution system with a service area of 50,000 acres.

The district looks upon the extensions as a completion of the existing distribution system and not as a new project. In financing the repayment as well as operations, the district contemplates treating the proposed extensions and existing distribution system as one unit. The present tax evaluation of the district is $15 million which represents less than one quarter of the true evaluation, with an indebtedness of $8,500,000 for the existing system. Because there is less than 4 percent of the district's area involved in the extensions, the board of directors of the Southern San Joaquin Municipal Utility District is of the unanimous sense that there is ample repayment capacity. Only 1 member of the 5-man Board owns property within the service area in question.

It is my understanding that officials of the Bureau of Reclamation have no doubts with regard to the districtwide capacity for repayment for the extensions and have so testified.

The resolution of the board of directors, dated August 8, 1956, committed the entire lands of the district to the repayment of the construction costs of these extensions.

The directors of the Southern San Joaquin Municipal Utility District are confident that all lands within the service area of the proposed extensions will be developed and placed in production. Principal benefits to the district by the construction of these extensions would be the assistance this area could give in stopping the depletion of the underground water basin, the increase in the district tax base, and the economies that can be made by fuller utilization of the district's personnel and equipment. A direct benefit to the United States would be the district's quicker utilization of its maximum allotment of Central Valley project water.

In behalf of the board of directors, I urge you to reinstate the appropriation for this district's extensions and provide language that would authorize the Bureau of Reclamation to enter into a repayment contract for the construction of the extensions to laterals 119.6W and 122.5W.

Thank you.

WELL WATER AND SURFACE-FLOW WATER

Chairman HAYDEN. Do you depend entirely on surface flow for irrigation or do you use wells?

Mr. MARSHALL. Everybody in the district has his own wells. They had them before we had any water available from the Central Valley project and we use the wells yet when we need them.

Chairman HAYDEN. It is a combination then?

Mr. MARSHALL. It is a combination, yes.

Chairman HAYDEN. Has the fact that you place surface water on the alkali land and then it is percolated down into the ground affected the well water?

WATER TABLE

Mr. MARSHALL. No. Our water table had been dropping since 1912, at the rate of, oh, 5 or 10 feet a year. In 1912 the water was 28 feet deep and now it is anywhere from 300 to 400 feet. Since we have had the canal water, the water level has not gone down any and in case after case it has gone up from 5 to 10 feet a year.

Chairman HAYDEN. It shows that the water does percolate down.

Mr. MARSHALL. But we are still way down.

Chairman HAYDEN. The irrigation water does percolate down and is affecting the underground water table or level.

Mr. MARSHALL. That is right.

Chairman HAYDEN. We have a similar situation to that in Arizona. I just wondered if the fact that there is alkali on the surface, and that alkali is washed out by percolation down to the subsoil, whether that finally gets down to the water enough to affect the water?

Mr. MARSHALL. It has to go through too many feet of soil there to make any difference.

Chairman HAYDEN. Thank you for the statement.

LETTERS FROM SENATOR KUCHEL

Chairman HAYDEN. I have received letters from Senator Kuchel with respect to the action of the House in disallowing funds for two California projects. These letters will be included in the record.

(The letters referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
June 20, 1957.

Hon. CARL HAYDEN,
Chairman, Appropriations Committee,
United States Senate, Washington, D. C.

DEAR SENATOR HAYDEN: In this morning's hearings by your committee on items in the 1958 budget for reclamation projects in California, I should very much appreciate having the benefit of your usual keen interest in one matter which has suffered these past 2 years from a series of technical obstacles. I refer to the Sacramento Valley Canals project.

A year ago the question had been raised whether further expenditures could be made on the first unit of the project, the Corning Canal, without a fully executed water-service contract between the Bureau of Reclamation and the Corning Irrigation District. With your assistance in committee and in the Senate at the time of the passage of the appropriation bill for the Bureau of Reclamation and allied activities, we established that such a requirement was to be applied to projects of the future but not to projects partially completed, such as the Sacramento Valley Canals project. Unfortunately, the House of Representatives disagreed with us. It took the position that the requirement was applicable to going projects as well as to proposed projects. Expenditures for the completion of the Corning Canal were therefore suspended.

In the intervening year the Corning Irrigation District has concluded a water service contract with the Bureau of Reclamation. The contract has been approved by the District Securities Commission of the State of California, as required by our laws.

Meantime, also, our State supreme court has decreed that the United States may not enforce the requirement that an individual receiving water from a Federal reclamation project cannot be the owner of more than 160 acres of land. But I am advised that the constituents of the Corning Irrigation District are prepared to comply voluntarily with this historic limitation upon land ownership within a Federal reclamation project.

Whether this new technical obstacle can be overcome promptly or not, it seems to me that the request of the Bureau of the Budget for funds to finish the Corning Canal—now 90 percent complete—should receive the approval of Congress in order that they may be available the moment the problem is resolved. The Corning Canal is a meritorious and necessary project. Indeed, the entire Sacramento Valley canals system, as conceived by the people of the area and planned by State and Federal engineers, is essential to the future growth and economic well-being of the area it will serve.

Very sincerely yours,

THOMAS H. KUCHEL,
United States Senator.

UNITED STATES SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
June 20, 1957.

Hon. CARL HAYDEN,
Chairman, Senate Appropriations Committee,
The Capitol, Washington, D. C.

DEAR SENATOR HAYDEN: Representatives of the Southern San Joaquin Municipal Utility District will appear before your Subcommittee on Public Works Appropriations to urge favorable action on funds, requested by the Bureau of Reclamation under the Central Valley project allocations, which would permit the extension of the distribution system presently serving the district. The House committee disallowed the funds.

It appears to me that the district is caught by the technical construction of language in a past Interior Appropriations Act which requires a soil survey and

a certification as to irrigability by the Secretary. I understand this language was inserted by reason of a writeoff request from the Bureau following an unhappy experience on a project where no survey of the lands to be benefited had been conducted. Although the principle of the language which would appear to block Southern San Joaquin's hopes is undoubtedly a worthy one, I think it misapplied in their case, for reasons explained to me as follows:

(*a*) About 47 percent of the 4,000 acres involved are considered nonirrigable under Bureau specifications. This is hardly 3 percent of the total district area of 62,000 acres, all of which would be back of the repayment contract to be signed by the district. Thus there appears to be no risk to the Government involved.

(*b*) Some 1,600 acres of the 4,000 acres involved are under pump irrigation at the present time. The lands are doing very well and could do even better with the assured water supply the extensions would bring.

(*c*) The existing distribution system was built by the Bureau with capacity to serve the extensions. If the extensions are not built, the district will in effect be buying a system, an effective part of which will never be used.

(*d*) The Bureau, although considering itself unable at the present time to certify all of the lands as irrigable, considers the extensions to be a sound proposition without risk to the Government in the light of the district's demonstrated capabilities and willingness to put all of its lands behind the repayment contract.

I am most hopeful that you will find it possible in the light of these facts to restore the funds necessary to the advancement of this worthwhile proposal.

Respectfully yours,

THOMAS H. KUCHEL.

SOUTHWESTERN POWER ADMINISTRATION

Chairman HAYDEN. During the hearings on the Southwestern Power Administration, Mr. Wright, the Administrator, was requested to submit data to the committee with respect to the claims of the G. and T. cooperatives. This information has been submitted and will be included in the record at this time.

(The information referred to follows:)

(See page 38.)

DEPARTMENT OF THE INTERIOR, SOUTHWESTERN POWER ADMINISTRATION

Claims as estimated by G. and T. cooperatives

	Central	Northwestern	Western	Total
Amount of claim	$960, 770. 21	$355, 066. 90	$977, 134. 33	$2, 292, 971. 44
Amount paid	[1] 427, 827. 29	20, 551. 95	159, 685. 08	608, 064. 32
Amount due	532, 942. 92	334, 514. 95	817, 449. 25	1, 684, 907. 12

Claims as estimated by Southwestern Power Administration

	Central	Northwestern	Western	Total
Amount of claim	$960, 770. 21	$272, 709. 05	$533, 100. 24	$1, 766, 579. 50
Amount paid	[1] 427, 827. 29	20, 551. 95	159, 685. 08	608, 064. 32
Amount due	532, 942. 92	252, 157. 10	373, 415. 16	1, 158, 515. 18

[1] On the basis of certificate of settlement issued by the General Accounting Office.

Additional funds required on above estimates

	Amount	Cooperatives estimate	Southwestern Power Administration estimate
Appropriated	$1,200,000.00		
Expended	718,991.49		
Unexpended balance		$481,008.51	$481,008.51
Additional funds required		1,203,898.61	677,506.67
Total due cooperatives		1,684,907.12	1,158,515.18

Additional funds required—Payment on offset basis

	Central	Northwest	Western	Total
Cooperative estimate:				
Amount due cooperative	$532,942.92	$334,514.95	$817,449.25	
Amount due SPA	906,324.44	213,605.10	311,491.44	
Amount paid SPA	427,827.29	56,144.41	20,362.11	
Amount due SPA	478,497.15	157,460.69	291,129.33	
Net amount due cooperative	54,445.77	177,054.26	526,319.92	$757,819.95
Less unexpended balance				481,008.51
Additional funds required—net				276,811.44
SPA estimate:				
Amount due cooperative	532,942.92	252,157.10	373,415.16	
Amount due SPA	906,324.44	213,605.10	311,491.44	
Amount paid SPA	427,827.29	56,144.41	20,362.11	
Amount due SPA	478,497.15	157,460.69	291,129.33	
Net amount due cooperative	54,445.77	94,696.41	82,285.83	231,428.01
Unexpended balance—available				481,008.51

BENTONVILLE TRANSMISSION FACILITIES

Chairman HAYDEN. I have received a letter from Mr. Frank Wilkes, chairman of the board of the Southwestern Gas & Electric Co., and a telegram from Mr. J. Robert Welsh, president of this organization in which these gentlemen express their opposition to the construction of the Bentonville transmission line. These communications will be included in the record.

(The communications referred to follow:)

SOUTHWESTERN GAS & ELECTRIC CO.,
Shreveport, La., June 14, 1957.

Hon. CARL HAYDEN,
Chairman, Subcommittee of Committee on Appropriations,
Department of the Interior,
United States Senate, Washington, D. C.

MY DEAR SENATOR: We understand Mr. D. G. Wright, administrator, Southwestern Power Administration, appeared before your committee this week. During this appearance, he informed you of the signature of a contract between Southwestern Power Administration and Southwestern Gas & Electric Co., under which power developed at multiple purpose projects in the Southwest area could be delivered by Southwestern Power Administration to Southwestern Gas & Electric Co., for delivery by it from transmission lines owned and operated by Southwestern Gas & Electric Co. to preferred customers in the entire area in Arkansas served by Southwestern Gas & Electric Co. We join Mr. Wright in expressing our pleasure and happiness over the final signature of this contract, for which both of us have labored diligently since 1946.

We are also informed Mr. Wright, in his statement to your committee, stated that the $290,000 appropriated last year for the building of a transmission line from a transmission line in southwest Missouri to Bentonville, Ark., was insufficient and that he would require some $60,000 additional, making a total of $350,000 to construct this line. We understand, he further stated that as of this date no expenditures have been made on this line and its status was practically the same as it was last year at the time your committee authorized the expenditures of $290,000 on it.

In 1947, Mr. Wright closed a contract with Texas Power & Light Co., which, in 1948, he proudly stated to your committee had eliminated the necessity of $6,500,000 worth of transmission lines which had been approved by your committee and that of the House in 1947. This amount was rescinded and returned to the Treasury for reappropriation for other purposes.

We want to submit to you that the signature of the contract by and between Southwestern Power Administration and Southwestern Gas & Electric Co. eliminates any remote possibility of the necessity of a transmission line from a leased line of the Government in southwest Missouri (from Kamo) to Bentonville, as Bentonville is now receiving, for company's account, and will in the future be served for Government's account, its electric service over a duplicate transmission line already in place and serving that city.

The item of $350,000 requested by Mr. Wright can, therefore, be eliminated just as the $6,500,000 item was in Texas by the signature of the Texas contract.

We respectfully submit that this item should be rescinded and request of Southwestern Power Administration for additional funds for construction be reduced by this amount.

With kindest personal regards.

Yours very truly,

FRANK M. WILKES,
Chairman of the Board, Southwestern Gas & Electric Co.

SHREVEPORT, LA., *June 18, 1957.*

Senator CARL HAYDEN,
Chairman, Subcommittee on Interior Appropriations,
Senate Office Building, Washington, D. C.:

Douglas Wright, Administrator of Southwestern Power Administration, has told the Senate Appropriations subcommittee about the new contract he has signed with our company providing for service by the Government to certain preferred customers from our transmission system. This contract provided Southwestern Power Administration with the power it needs to serve preferred customers and makes it unnecessary for the Government to build transmission lines for such service. Last year the Senate Appropriations Committee approved construction of a Government transmission line from southwest Missouri to Bentonville, Ark., to give Government service to Bentonville, and approved an expenditure of $290,000 to build the line. We have been selling Bentonville power for years with two-way service and are willing to let Government serve Bentonville from our system under the new contract with Southwestern Power Administration. The Government line to Bentonville has not been built and is not necessary because of the new contract between Southwestern Power Administration and our company. The Government can save about $300,000 by canceling the proposed Southwestern Power Administration line to Bentonville, which, if built, will only duplicate our service. We request you save the tax payers this amount of money.

J. ROBERT WELSH,
President, Southwestern Gas & Electric Co., Shreveport, La.

MIDDLE RIO GRANDE PROJECT

Chairman HAYDEN. The statements of Mr. John Murphy and Mr. Hubert Walters, who have appeared before this committee many times, will be included in the record. These gentlemen, as you know, are interested in the Middle Rio Grande project.

(The statements referred to follow:)

STATEMENT BY JOHN PATRICK MURPHY, EXECUTIVE SECRETARY, MIDDLE RIO GRANDE FLOOD CONTROL ASSOCIATION

Mr. Chairman and members of the committee, my name is John Patrick Murphy and I am executive secretary of the Middle Rio Grande Flood Control Association. I have been authorized by the board of directors of this association to appear on behalf of the membership and present their views in support of our Middle Rio Grande project in New Mexico as authorized in the Flood Control Acts of 1948 and 1950, Public Law 858, 80th Congress, and Public Law 516, 81st Congress, respectively.

The Bureau of Reclamation, with the approval of the Budget Bureau, has submitted a request for funds for fiscal year 1958 in the amount of $3,758,000, for continuation of the rehabilitation work on this project.

This amount is earmarked for the purposes of (1) completion of channelization work in the Espanola Valley; completion of the Socorro channelization; construction of 3 miles of low flow channel in the San Marcial Lake area; and for investigations and design of the balance of the channelization work; (2) for clearing, cleaning, and replacing structures in 48 miles of laterals in the Belen area; and for preparation of designs and acquisition of rights-of-way for future lateral rehabilitation scheduled for completion in fiscal year 1960; (3) construction of the 2.5 mile North Reach Extension-Atrisco Feeder Canal, and construction of 12 miles of maintenance roads; and preparation of designs and acquisition of rights-of-way for additional canal work scheduled for completion in fiscal year 1959; and (4) rehabilitation of Angostura diversion works; Cochiti diversion dam and to complete the rehabilitation of El Vado Dam.

During the past 6 years of the rehabilitation program, the United States Geological Survey, placed the salvage in precious water at 223,700 acre-feet. When the Socorro channelization is completed, they estimate the annual water savings to be increased by 50,000 acre-feet, and an additional 10,000 acre-feet will be saved after river channel improvement work is extended up stream through the Belen, Albuquerque, and Cochiti Divisions. Most of this salvaged water will continue to be channeled through into Elephant Butte Reservoir where it is sorely needed.

In dollar value, on the basis of a minimum of $35 per acre-foot, they evaluate the savings thus far as worth over $7,800,000 to the lower valley of New Mexico and Texas. Therefore, it must be realized and appreciated, that during this critical period of drouth and water shortage, the people in our valley are disturbed and worried over the length of time it is taking to complete this essential and urgently needed project of rehabilitation.

We respectfully beg of this committee not to cut this amount in any way, because, it is at best, merely a bare minimum. The work of restoring the agricultural facilities of this important area, can no longer be postponed without serious deterioration of the valley's ability to support its established economy and its tremendously increasing population.

I appreciate the opportunity to appear here today, and—on behalf of the 500,000 people in the middle Rio Grande Basin whom I represent, I say "thank you" for your kind consideration.

STATEMENT OF HUBERT BALL TO THE SENATE APPROPRIATIONS COMMITTEE, JUNE 1957

Mr. Chairman and members of the committee, my name is Hubert Ball and I live in Albuquerque, N. Mex. I am chief engineer for the Middle Rio Grande Conservancy District and I am authorized by the board of directors to appear before you today supporting continued appropriations for reclamation work in our area. The Bureau of Reclamation and the Bureau of the Budget have approved a request for $3,758,000 to continue channelization of the Rio Grande in the Espanola and San Acacia areas. They also contemplate a continuation of the rehabilitation of irrigation laterals and structures in the Belen and Albuquerque divisions of the conservancy district.

This work has been approved by the Bureau of the Budget and the House of Representatives in their recent appropriations bill allowed this $3,758,000 for these purposes. We earnestly request that you concur in this approval and appropriate the full amount in order to continue an economical and satisfactory rate of construction.

The conservancy district and I both wish to thank you very much for your past consideration.

NAVAHO DAM, COLORADO RIVER STORAGE PROJECT

Chairman HAYDEN. I have received a letter from Senator Chavez concerning funds for the construction of the Navaho Dam. This letter will be included in the record.

(The letter referred to follows:)

UNITED STATES SENATE,
COMMITTEE ON PUBLIC WORKS,
June 17, 1957.

Hon. CARL HAYDEN,
Chairman, Senate Appropriations Committee,
Washington, D. C.

DEAR CARL: The budget request for the upper Colorado River Basin fund was approved by the House Appropriations Committee in the amount of $25,142,000, of which $1,800,000 would be for the Navaho Dam and Reservoir project. In the House hearings testimony was introduced which indicated that the upper Colorado appropriation could well be upped by an additional $8 million in order to provide for the best continuing program of construction of the projects.

As you undoubtedly are aware, $800,000 was appropriated for fiscal year 1957 for the Navaho Dam and Reservoir project. It is my understanding that the Bureau of Reclamation is proceeding with construction of community facilities, access roads, and the preparation of designs and specifications. It appears that with the engineering work which has been done and the progress that has been made to date, that a contract could possibly be awarded this coming winter for the initiation of construction work on the Navaho Dam. Under those conditions, $1,800,000 would not be sufficient to carry out an efficient program of construction. In all probability, at least 3 to 3½ million dollars could be efficiently used on this project during fiscal year 1958.

The Navaho Dam and Reservoir project will cost an estimated $36,887,000 of which $36 million would be for the dam and reservoir alone. Therefore, in order to carry out a reasonable program of construction, it would seem to me that 10 percent of the total funds should be appropriated annually so that the project would not be unnecessarily delayed and thereby become more costly.

I strongly urge that the funds for the Navaho Dam construction be specifically earmarked for that sole purpose to prevent the possibility that it might be diverted for other uses.

Your favorable consideration of this request would be most sincerely appreciated.

Sincerely,

DENNIS CHAVEZ, *Chairman.*

FORT RANDALL-GRAND ISLAND TRANSMISSION FACILITY

Chairman HAYDEN. I have received a letter from Mr. Dewey J. DeBoer, executive director of the Nebraska Public Power System concerning the Fort Randall-Grand Island transmission line. This letter will be included in the record.

(The letter referred to follows:)

NEBRASKA PUBLIC POWER SYSTEM,
Columbus, Nebr., May 17, 1957.

Subject: Fort Randall-Grand Island 230-kilovolt transmission line.

To Hon. Carl Hayden, Chairman, and Members of the Senate Appropriations Committee, Subcommittee on Bureau of Reclamation and Interior Power Marketing Agencies, United States Senate, Washington, D. C.

ESTEEMED GENTLEMEN: In 1955 we appeared before your committee on behalf of the public power agencies in Nebraska with a request for an appropriation for the construction of a high-capacity, 230-kilovolt transmission line from Fort Randall powerplant on the main stem of the Missouri River in South Dakota to Grand Island, Nebr. Funds for this line had not been requested by the Interior Department at that time and were not included in the budget under consideration. After giving our group a full hearing, your committee denied our request.

Again in 1956 (last year), we appeared before your committee with the same request. This time, however, the Interior Department had included funds in the amount of $5,500,000 in a supplementary budget which item was approved by the Bureau of the Budget and recommended by the President (Public Document 343). Again, your committee saw fit to deny our request and specifically deleted funds for this project from the budget.

Because of these prior appearances, your committee is of course reasonably familiar with the basic facts relating to this transmission line. The following few short paragraphs should suffice to bring your committee up to date:

1. The original Pick-Sloan plan for development of the Missouri Basin provided for high-voltage, high-capacity transmission lines to market the power in the basin States. Most of these lines have either been completed, are under construction or have been authorized. Only the proposed line into Nebraska has not been authorized; this in spite of the fact that Nebraska is the only wholly public power State and the only State lying wholly within the basin.

2. Nebraska's pump irrigation load continues to grow. There are now 20,000 irrigation wells in the State. In 1956 the actual pumping demand on our system was over 74,000 kilowatts. A continuation of this rate of growth will see this load grow to 100,000 kilowatts by 1959 and approximately 200,000 kilowatts by 1963.

3. This irrigation pumping load represents a reclamation project of first water. The farmer digs the well and provides the pump, ditches, pipe, etc., and is willing and anxious to pay firm prices for the necessary electric power to operate the wells so that he can reclaim Nebraska's abundant underground water resources for agriculture and economic development. The Federal Government is not requested to invest in these facilities.

4. The Missouri Basin project generates large quantities of seasonal power which is available only in the summertime coincident with water releases for navigation purposes. To the extent that there is a market for this power, it is sold at dump rates. Nebraska's irrigation farmers are anxious to pay firm rates for this power. This would result in from $175,000 to $300,000 additional revenue to the United States annually for this class of power alone.

5. The 230-kilovolt line from Fort Randall to Grand Island is a must to bring buyer and seller together with benefit to both.

6. Nebraska will need and will be entitled to an additional block of year-round or firm power when the Oahe powerplant goes into operation in 1961 or 1962.

7. The Department of the Interior has determined that the line is economically feasible, considering both seasonal and firm power deliveries. Its cost will be repaid with interest by the electric users of Nebraska.

8. Nebraska is currently constructing a short, low-voltage, low-capacity transmission line to Gavins Point powerplant as an emergency measure to meet anticipated loads this summer. This is essentially a stopgap measure and does not in any way take the place of, detract from the need for, or reduce the feasibility of the 230-kilovolt line to Grand Island.

9. This line will make it possible to coordinate surplus wintertime steam generating capacity in Nebraska with minimum water releases in the Missouri River, thereby firming up hydropower to the mutual advantage of the basin States.

We again earnestly solicit your favorable consideration of our request for budgetary appropriation which will permit the Bureau of Reclamation to construct this much needed and worthwhile transmission line. In all fairness to Nebraska, it should be authorized and constructed as soon as possible. The benefits to the United States are demonstrable and assured.

We shall be happy to provide more detailed information.

Sincerely yours,

D. J. DeBoer.

MONTANA PROJECTS, BUREAU OF RECLAMATION

Chairman Hayden. The committee has received a statement from Senator Mansfield concerning funds for the Montana projects. This statement will be included in the record.

(The statement referred to follows:)

STATEMENT OF SENATOR MIKE MANSFIELD (DEMOCRAT, MONTANA) ON APPROPRIATIONS FOR THE BUREAU OF RECLAMATION FOR FISCAL YEAR 1958

Mr. Chairman, I appreciate having the opportunity of appearing this morning in behalf of funds for the Bureau of Reclamation. I want to discuss briefly the funds being requested for multipurpose and irrigation projects in the State of Montana. I appeared several weeks ago in behalf of funds for the Army engineers projects in this bill.

As I have stated on previous occasions Montana is a State blessed with vast natural resources and some of the greatest power potential in the United States. Funds appropriated by Congress are the guiding rule in the process of developing these resources. Although the Bureau of Reclamation is not too active in the State on a large scale at this time I do want to express the approval of the Montana congressional delegation for these various Bureau projects and ask that sufficient funds be appropriated so that each project may go ahead on schedule.

The distinguished senior Senator from Montana, James E. Murray, and the State's two able Congressmen, Lee Metcalf and LeRoy Anderson, ask that I express their unified support of these appropriations.

Under the Missouri River Basin drainage and minor construction program I want to state my approval of the program providing for the acquisition of additional right-of-way for lands affected by seepage from the reservoir. The budget request is for $146,000 for acquisition of these lands as the need arises.

I have had correspondence from a number of individuals in this area who are being forced to give up their farming and ranch land because of the seepage from the reservoir and I feel that it is only fair that they be compensated accordingly.

Under this program there is a $21,000 request to provide for the construction of additional drains and further settlers' assistance on the Crow Creek pumping unit in Montana.

It is with a great deal of pleasure that I have noted that the Administration has requested $4,500,000 and subsequently approved by the House, for the continued construction on the Helena Valley unit. This is the second year that substantial funds have been provided for this important project in western Montana. I understand that these funds will provide for a start on the lateral and drainage system. As the members of the subcommittee may recall there were considerable difficulties in forming the Helena Valley Irrigation District but this has been resolved and it appears that this project is going ahead smoothly. In fact I believe the first facilities for irrigation are scheduled to be ready in fiscal year 1959.

I was extremely disappointed to learn that the House had directed in its report on this public-works appropriation bill that funds previously appropriated for the Yellowtail unit in Montana should now be applied to other approved projects in the Bureau's 1958 program. As you know, the main obstacle to the construction of the Yellowtail Dam and Reservoir has been the transfer of the right-of-way of some 7,000 acres of land on the Crow Indian Reservation. The Senate passed a joint resolution several months ago redirecting the Secretary of the Interior to pay $5 million for this transfer. The bill is now before the House. The President vetoed a similar joint resolution providing a $5 million payment in the last session of Congress; however, it is hoped that in view of more information and supporting data that the President will see fit to sign this legislation when it passes the House. In the event that funds cannot be provided for this project in this bill I sincerely hope there will be time to provide construction funds for the Yellowtail project in one of the supplemental bills, which will be considered by Congress prior to adjournment.

This public-works appropriation bill, which the committee is considering today, provides funds for the collection of design data, completion of design, awarding of contracts and acquisition of rights-of-way for the Fort Peck-Dawson County 230-kilovolt transmission line and substation. Construction of this line is scheduled to start late in fiscal year 1958 according to information I have from the Bureau. The Montana delegation strongly urges that these funds be provided as these transmission lines are extremely necessary in providing service to the State.

I want to take a few minutes to discuss further the matter of transmission lines in Montana. At the time Congressman Metcalf appeared before the House Appropriations Committee in behalf of these funds he presented a very complete and detailed statement on the construction of transmission lines in our State and I am submitting to the committee a copy of this statement for your consideration.

You will note that upon a number of occasions the Bureau of Reclamation has proposed or started construction of transmission lines in the vicinity of the

Canyon Ferry Dam, Fort Peck Dam, and Yellowtail Dam site but each time a wheeling agreement was negotiated between the Bureau of Reclamation and the Montana Power Co. and the Federal lines were abandoned. With the denial of these transmission lines Canyon Ferry has become a captive plant of a private utility. The utility offered the electric cooperatives the same rate as that offered by the Federal Government but few of the Montana cooperatives have taken advantage of this wheeling agreement, which is unfavorable to them. As a result Montana Power Co., is in the position of being the sole customer for the 50,000 kilowatt Canyon Ferry project.

I might point out that there are no Federal facilities connecting the Canyon Ferry plant with other Federal power projects.

Unlike Canyon Ferry the Fort Peck project has Federal transmission lines from the plant in directions going west and south; a 115-kilowatt line connects the project with the Garrison Dam in North Dakota. However, available firm energy has not been fully absorbed in the Fort Peck area at firm rates according to information at my disposal. The Federal Government has been losing money on power sold from Canyon Ferry and its status as a captive powerplant has enabled the Montana Power Co. to exercise a veto over expansion plans of rural electric cooperatives. The facts indicate the dire need for Federal transmission lines in this area and as Congressman Metcalf indicated to the House committee there are two alternative plans which would release Canyon Ferry from its status as a captive plant.

One, would include a transmission line from Canyon Ferry to Billings and thence to Yellowtail Dam site. A second line from Yellowtail to Miles City would complete the initial phase of this plan. This plan would effectively integrate Canyon Ferry with the eastern division of the Missouri River Basin system and with Yellowtail Dam, when constructed. The Yellowtail-Miles City line would interconnect with the Bureau's existing Miles City-Glendive line.

The alternate plan would include lines from Canyon Ferry to Anaconda and from Canyon Ferry to Great Falls. These lines would integrate Canyon Ferry with the Bonneville system and the Bureau's Great Falls substation. I believe that either of these alternatives are feasible and justified and I feel that the committee should give every consideration to the construction of these transmission lines.

Mr. Chairman, this concludes my statement this morning and I want to thank the members of the subcommittee for all consideration given to the Bureau of Reclamation projects in Montana.

UPPER COLORADO RIVER PROJECT

Chairman HAYDEN. Senator Bennett had planned to be here today to discuss funds for the upper Colorado River project and other projects in Utah. I have been advised that he is compelled to attend a meeting of the Finance Committee. His statement will be included in the record.

(The statement referred to follows:)

STATEMENT BY SENATOR WALLACE F. BENNETT

Mr. Chairman, I am very pleased to have the opportunity of appearing before this distinguished committee as you conclude your deliberations on the very important public works appropriation bill.

May I say initially that I am pleased with the action of the House in approving the President's full budget request of $25,142,000 for the upper Colorado River storage project. This action is particularly welcome in the light of the serious cuts made by the House Appropriations Committee last year which were partially restored on the House floor and then raised by this committee and the Senate. I believe the House has now recognized the tremendous value and importance of the project.

The House action is, of course, but a minimum of what can be wisely and efficiently utilized on the upper Colorado project.

As you have heard from other witnesses, including Commissioner Dexheimer of the Bureau of Reclamation, the prime contractor on the Glen Canyon Dam estimates that $8. 5 million would be needed for an operation of maximum efficiency, which is $4.1 million more than was anticipated in the $17.3 million budget

request for Glen Canyon. Moreover, an additional $4 million could be efficiently utilized on other construction at Glen Canyon.

Since the President's budget was submitted to Congress in January, final project reports have been completed on the Vernal unit participating project in northeastern Utah and on the Paonia project in Colorado. As you have heard from Commissioner Dexheimer, up to $1 million can be efficiently utilized by the Bureau on the Vernal unit during the coming fiscal year. This project would serve an area where years of drought have exacted a fearful economic toll.

During the consideration by the Senate of the fiscal 1958 budget requests, I have felt that I could support the judgment of this committee in its efforts to effect economies on projects and budget items, many of which were not of direct interest to the State of Utah. Since I have supported the action of this committee on such projects I have felt that I cannot ask this committee against its sound judgment to make specific appropriation increases on projects of especial interest to my State.

However, I have great trust in the judgment of this committee and know that it has always been considerate of the needs of reclamation. I know that if this committee feel that increases this year for the upper Colorado project are justified, they will be made.

In making your determination there are several factors which should be weighed alongside the manifest need for economy in the present state of our national economy and the danger of inflation. One of the major factors is that delay in constructing the Glen Canyon Dam will be costly over the long run and indeed presently. The prime contractor will have to cut his construction program in fiscal 1958 by 50 percent, under the House approved appropriation, which in turn will mean a stretchout for construction. During the stretchout, interest must be paid on the funds expended during construction which means the costs will be raised for the entire project, possibly endangering its feasibility. Moreover, as the Bureau of Reclamation has testified, construction costs have been rising by 4½ to 8 percent each year, which means that even a year's delay exacts a great toll.

A more general consideration which should be weighed is the fact that the 4 upper Colorado Basin States contributed $24,153,322 to the reclamation fund during fiscal year 1956 alone, and $224,999,871 since 1902. This money is in a very real sense held in trust for the reclamation States. The project itself is over 99 percent repayable. In addition, interest will be paid on $515 million of the $760 million project as approved by Congress.

I know your decision will be a wise one.

There are three other projects in the bill which are of great interest in Utah, all of which were approved in full by the House committee, while at the same time it made cuts in many other public works projects. This, I believe, is ample testimonial of the soundness of the projects. A sum of $574,000 is recommended to continue work on the Provo River channel and to complete the powerplant at the Deer Creek Dam. In addition, $6,500,000 is included in the bill for the Weber Basin project which along with a carryover by the Bureau of Reclamation from the current fiscal year will allow maximum progress toward completion of this vital project. I hope this committee will support the House action.

It is particularly gratifying to me that $300,000 has been approved to initiate the Jordan River and Surplus Canal project for which I have worked since 1952 when we had a most serious flood in Salt Lake City. If construction is begun in fiscal 1958, substantial protection will be provided against the 1959 spring runoff for the western one-fourth of Salt Lake City from floods on the Jordan River.

I thank you for hearing me this morning.

MEMORIAL OF THE NEW MEXICO LEGISLATURE

Chairman HAYDEN. A copy of Joint Memorial No. 8 of the New Mexico Legislature will be included in the record. This memorial deals with the upper Colorado River storage project.

(The memorial referred to follows:)

(Senate Joint Memorial No. 8, introduced by Senators Horace De Vargas, T. E. Lusk, and G. E. Melody, 23d Legislature, State of New Mexico.)

A JOINT MEMORIAL IN APPRECIATION OF THE EFFORTS OF THE NEW MEXICO CONGRESSIONAL DELEGATION; AND REQUESTING SAID DELEGATION TO SPONSOR NEEDED LEGISLATION IN CONNECTION WITH THE UPPER COLORADO RIVER PROJECT

Whereas the upper Colorado River project is a monumental work of planning and engineering; and

Whereas the project will have profound and beneficial effects upon the economic and agricultural development of New Mexico, enabling it at last to utilize its full share of the water resources of the upper Colorado River: Now, therefore, be it

Resolved by the Legislature of the State of New Mexico, That the legislature expresses to the members of the congressional delegation of New Mexico its appreciation, gratitude, and admiration for their untiring efforts, keen vision, and wise statesmanship in securing the passage of the Federal legislation authorizing the upper Colorado River project; and be it further

Resolved, That the members of the congressional delegation of New Mexico are hereby respectfully petitioned to cause to be drawn and introduced in the United States Congress legislation and appropriations needed to expedite to the greatest degree possible the planning and construction of the authorized projects of the upper Colorado River; and be it further

Resolved, That a copy of this memorial be sent to each member of the congressional delegation.

JOE M. MONTOYA,
President, Senate.
GRACE MCAFEE,
Chief Clerk, Senate.
DONALD D. HALLAM,
Speaker, House of Representatives.
FLOYD CROSS,
Chief Clerk, House of Representatives.

Approved by me this 22d day of March 1957.

EDWIN L. MECHEM,
Governor, State of New Mexico.

BONNEVILLE POWER ADMINISTRATION

Chairman HAYDEN. The statement of Mr. C. A. Erdahl, chairman of the Pacific Northwest Utilities Conference will be included in the record.

(The statement referred to follows:)

STATEMENT OF C. A. ERDAHL, CHAIRMAN, THE PACIFIC NORTHWEST UTILITIES CONFERENCE COMMITTEE

This is the 11th year that the Pacific Northwest Utilities Conference Committee has been privileged to meet with you relative to the participation of the Federal Government in our task of providing an adequate power supply for the people of the Pacific Northwest.

The conference committee needs no introduction to some of you but for the record it should be stated that it is composed of representatives of non-Federal electric utilities of the region, both publicly and privately owned, which are connected to the west group of the Northwest power pool. This representation is at the management level.

The group was organized over 10 years ago with the hope of accelerating the program for development of our electric power resources.

We have appeared here annually since that time to discuss with you the Federal Government's appropriations for power development in our region and we are here again now for that purpose.

This year's budgeted appropriations for new power facilities in the Pacific Northwest in total represent a marked decrease under the levels of appropriation enjoyed by the region in past years. We are fully aware and sympathetic to the desire of the Congress to reduce Federal expenditures and have been mindful of that purpose in our examination of the items included in the budget.

It seems to us that the development program of the Federal Government concerning the water resources of the Columbia River Basin is not yet completed and in appraising the level of appropriations for new power facilities for fiscal year 1958 we are wondering if this drastic cutback may not be a little too severe.

We are therefore recommending a very modest increase in the total of the appropriations which will be more fully explained in the items that follow:

BONNEVILLE POWER ADMINISTRATION

Our industry has examined the Bonneville Power Administration's budget covering new construction in detail. We find that the construction budget does not contain any proposed construction that predates the time of need. We recommend approval of the item of $30,800,000 for construction.

Bonneville's item of $8,630,000 for operation and maintenance is also reasonable and is recommended for your approval. We find that it is adequate at a minimum level consistent with the contractual obligations of the Administrator.

CORPS OF ENGINEERS

Chief Joseph.—This project is in the final stages of construction and the item of $4,800,000 is adequate at a minimum level and is recommended for approval.

The Dalles.—Construction work on this project has advanced to where the pool behind the dam has been formed thereby permitting improved navigation. Installation of generating units is proceeding on schedule. We believe the $19 million item in the budget to be adequate at a minimum level and will permit maintenance of the generator installation schedule now proposed. We recommend approval of this item in full.

NEBRASKA RECLAMATION ASSOCIATION

Chairman HAYDEN. I have received letters from the Nebraska Reclamation Association in support of funds for the Farwell and Ainsworth units of the Missouri River Basin project. These letters will be included in the record.

(The letters referred to follow:)

NEBRASKA RECLAMATION ASSOCIATION,
Lincoln, Nebr., June 19, 1957.

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations, United States Senate,
Senate Office Building, Washington, D. C.

DEAR SENATOR HAYDEN: It is our understanding that your committee has scheduled a hearing on Friday, June 21, for consideration of various appropriations, including one of $750,000 for the Farwell irrigation unit in Nebraska.

Kindly permit us to call to the attention of the committee the action taken by the Nebraska Reclamation Association concerning this important project.

We quote the following excerpt from the minutes of the board of directors meeting held at Kearney, Nebr., March 13, 1956:

"Following brief discussion, it was moved by Nosky and seconded by Svoboda that the board of directors of the Nebraska Reclamation Association heartily endorses the Farwell irrigation unit of the Missouri River Basin project now awaiting approval by the Congress and that secretary-manager promptly advise Senators Roman L. Hruska and Carl T. Curtis and Congressman A. L. Miller of this action. The motion carried unanimously."

On October 26, 1956, the association, in convention assembled at Holdrege, Nebr., unanimously adopted the following resolution:

"Whereas the Bureau of Reclamation initiated an overall survey in the Loup Valley of the Farwell unit to study irrigation, power, and flood control; and

"Whereas Congress has authorized the Farwell unit to become a part of the overall Missouri River Basin plan: Now, therefore, be it

"*Resolved*, That we urge congressional appropriation of funds for the construction of this unit."

On May 10, 1957, the association's board of directors at its regular meeting, held at Kearney, Nebr., unanimously reffirmed its endorsement of the Farwell irrigation unit and instructed its secretary-manager to inform you of this action.

We respectfully request favorable consideration of the Appropriations Committee of the United States Senate of an appropriation of $750,000 so that construction of this vitally needed project may get underway at the earliest possible

time, and we trust that you, as chairman, will see your way clear to include this letter as a part of the record of your hearing on June 21. Thank you.

Respectfully submitted.

WALLACE THORNTON,
Secretary-Manager, Nebraska Reclamation Association.

NEBRASKA RECLAMATION ASSOCIATION,
Lincoln, Nebr., June 19, 1957.

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations, United States Senate,
Senate Office Building, Washington, D. C.

DEAR SENATOR HAYDEN: It is our understanding that your committee has scheduled a hearing on Friday, June 21, for consideration of various appropriations, including one of $1,100,000 for the Ainsworth irrigation unit in Nebraska.

Kindly permit us to call to the attention of the committee the action taken by the Nebraska Reclamation Association concerning this important project.

On October 26, 1956, the association, assembled in convention at Holdrege, Nebr., unanimously adopted the following resolution:

"Whereas the Bureau of Reclamation initiated an overall survey of the Niobrara Valley in 1948, to study irrigation, power, and flood control; and

"Whereas Congress has authorized the construction of the Ainsworth unit in the Niobrara Valley to become a part of the overall Missouri River Basin plan, and the Ainsworth Irrigation District has entered into a repayment contract with the United States Government: Now, therefore, be it

"*Resolved*, That we urge congressional appropriation of funds for construction of this unit."

The association's board of directors, at its regular meeting May 10, 1957, at Kearney, Nebr., unanimously reaffirmed its endorsement of the Ainsworth irrigation unit and instructed its secretary-manager to inform you of this action.

We respectfully request favorable consideration of the Appropriations Committee of the United States Senate of an appropriation of $1,100,000 for this vitally needed project, so that it may be constructed and placed in operation at the earliest possible time.

We trust that you, as chairman, will see your way clear to include this letter as a part of the record of your hearing on June 21.

Thank you.

Respectfully yours,

WALLACE THORNTON,
Secretary-Manager, Nebraska Reclamation Association.

NORTON DAM, MISSOURI RIVER BASIN PROJECT

Chairman HAYDEN. A letter from the Honorable George Docking, Governor of the State of Kansas with respect to funds for the Norton Dam will be included in the record.

(The letter referred to follows:)

THE STATE OF KANSAS,
Topeka, May 13, 1957.

Hon. CARL HAYDEN,
Chairman, Appropriations Committee,
United States Senate, Washington, D. C.

DEAR SENATOR HAYDEN: I would respectfully urge favorable action of your committee on the request of citizens of Norton, Kans., for appropriation for the Norton Dam and for purchase and handling of water behind that installation after it has been constructed.

The appeal of these people is enhanced by the fact that they are prepared to participate in this program financially at the local level.

Sincerely,

GEORGE DOCKING, *Governor.*

NORTON DAM, MISSOURI RIVER BASIN PROJECT

Chairman HAYDEN. A statement by Senator Schoeppel with respect to funds for the initiation of construction of the Norton Dam will be included in the record.

(The statement referred to follows:)

STATEMENT BY SENATOR ANDREW F. SCHOEPPEL

Mr. Chairman, I appreciate the opportunity to give my support to the Kansas items in the reclamation and flood control sections of the public works appropriation bill for 1957.

Reclamation is making a substantial contribution to the stabilization of agriculture in drought-ridden sections of Kansas.

In addition to the Kansas budget items affecting Kansas in the reclamation section of the bill, I urge an initial appropriation of $1 million to start construction of Norton Dam on Prairie Dog Creek. This structure is urgently needed.

The budget items which are included in the reclamation sections for Kansas and which I commend for your consideration are:

Bostwick division, Nebraska-Kansas	$1, 471, 000
Kirwin unit, Kansas	1, 435, 000
Webster unit, Kansas	1, 000, 000

The Missouri River agricultural levees for which the House provided $5,300,000 are important to Kansas as well as Iowa, Nebraska, and Missouri.

ALMENA UNIT, MISSOURI RIVER BASIN PROJECT

Chairman HAYDEN. Representative Wint Smith, of Kansas, has submitted a statement with respect to funds for the construction of the Almena unit of the Missouri River project. This statement will be included in the record.

(The statement referred to follows:)

STATEMENT OF REPRESENTATIVE WINT SMITH, SIXTH DISTRICT, KANSAS

Mr. Chairman and gentlemen of the committee, let me take this means of thanking your committee for having approved adequate investigational funds, at my request 2 years ago, which permitted the Bureau of Reclamation to undertake a detailed study of the proposed Almena project, adjoining Norton, Kans. As a result, the Bureau is expected to be able to report the feasibility of this project, within the next few days, inasmuch as the field studies have been completed.

We all are cognizant of the burning desire to achieve an economy in the field of Federal expenditures, and I have no doubt but that your committee is under great pressure to hold down total appropriations of fiscal 1958. There is another side to this picture, however. A multiple-purpose project on the Prairie Dog Creek, running between Kansas and Nebraska, was authorized in the 1944 Flood Control Act. The United States Corps of Engineers is authority for the report that 8 times, since 1944, discharge at Norton exceeded flood stage of 18 feet. The last serious high-water period, experienced in 1953, resulted in property damage totaling $2,282,285. The Engineer Corps has assigned flood benefits of $200,000 annually to this project. So, if by delaying construction, the Congress could save perhaps $1 million out of the 1958 budget, it would be doing so at the expense of my constituents who are perennially faced with this serious flood threat. I do not believe that this is true economy.

I wish to add at this point that only last week the Prairie Dog Creek once more flooded from torrential rains in this watershed, causing yet undetermined losses to highways, railroads, and private property. The crest of this recent flood reached a high of 6½ feet above flood stage.

This particular project is approved by the Governor of Kansas, by the city officials of Norton, and by the business interests of that community. And the prospective water users, who would benefit from supplemental irrigation below the dam and reservoir also are preponderantly in favor of this project. It has

the double value to that watershed, in that the city of Norton contemplates purchasing its municipal water supply from the reservoir, thus affording a secondary source of reimbursable funds toward the cost of construction. While I have limited this statement to the desirability of getting construction started on the Almena project, in my district, I want to emphasize at this time the fact that the residents of the Republican River watershed in northwestern Kansas are just as eager as are the residents of eastern Colorado and southwestern Nebraska to see the basinwide development in the upper Republican River Valley brought to early conclusion. Year after year that area suffers great property loss, and frequently the loss of lives, from spring floods, only to encounter dangerous scorching drought by summer and fall. Nothing can do as much to stabilize the agriculture and business throughout the area as can the taming of the Republican and its tributaries, and the utilization of waste waters for supplemental irrigation.

GENERAL INVESTIGATIONS FUNDS

Chairman HAYDEN. A letter from Senator Kerr pertaining to funds for general investigations by the Bureau of Reclamation will be included in the record.

(The letter referred to follows:)

UNITED STATES SENATE,
Washington, D. C., June 19, 1957.

Hon. CARL HAYDEN,
Chairman, Senate Appropriations Committee,
United States Senate.

DEAR CARL: I have read the House report on the public works appropriations bill for 1958, particularly as it relates to general investigations for the Bureau of Reclamation.

I note that the House reduced the estimate for 1958 from $5,932,000 to $4,500,000, or $1,432,000. Further, in its report, the committee limited "transfers between projects and units of projects" to 15 percent of the amount allocated in the justifications, and prohibits the advancement from investigation to advance planning stage.

It is for these reasons that I call your special attention to two projects in Oklahoma, which are now being studied by the Bureau of Reclamation. These are listed in the table contained on page 1188 of the House hearings, part I, project investigation:

Arbuckle project (fiscal year 1958)	$25,000
Lawton-Duncan project (fiscal year 1958)	34,000

My concern is in the fact that the local interests in each of these projects have made very sizable contributions in order to get the projects advanced. For example, the reconnaissance report on the Arbuckle project is scheduled for completion in fiscal year 1958 and the feasibility report is scheduled for completion in fiscal year 1959. The local people, by voluntary subscription, have contributed already $2,960 this year.

The reconnaissance is virtually completed on the Lawton-Duncan project toward which local interests have contributed $2,453 and have subscribed $25,000 additional for the feasibility report scheduled for completion in fiscal year 1958.

In light of these sacrificial local contributions, I am in hope that your committee will see to it that progress on these two projects is not impeded because of reduction in the general investigation funds by the House.

Sincerely yours,

ROB'T S. KERR.

OAHE INVESTIGATIONS

Chairman HAYDEN. A statement by Senator Case pertaining to the investigations of the Oahe unit of the Missouri River Basin project will be included in the record.

(The statement referred to follows:)

STATEMENT BY SENATOR FRANCIS CASE (REPUBLICAN, SOUTH DAKOTA) ON BUREAU OF RECLAMATION ITEMS IN PUBLIC WORKS APPROPRIATION BILL

Mr. CASE of South Dakota. Mr. Chairman, long ago, many of us feel, the Bureau of Reclamation should have been able to give the farmers of the James River Valley the facts and figures on the feasibility of irrigation from the Oahe Reservoir on the Missouri River. But, it has proved to be a complex job. The answers are not complete and more funds are needed to get the full picture. Therefore, I urge you to provide the funds needed to carry the study along in the next fiscal year.

We are, Mr. Chairman, in the position of the man who bought himself an all-around horse. One that he could ride, drive and plow with. But at the outset, he bought only a saddle and a sulky. He did not buy a plow because he was not sure his field was worth planting. He went to the county agent to find out if it would pay to plow and plant his farm. And, if so, what part of it.

Uncle Sam has built, or is building the big Oahe Dam. It will store 23 million acre-feet of water. We know it will store floodwater and keep it off valley farms and cities downstream. We are going to use that Oahe Reservoir for flood control. We know that stored water will generate electricity. We are going to use the water behind Oahe Dam for production of power. But, as to irrigation, we don't have the answers yet.

The Bureau of Reclamation has come up with a preliminary informational report, on the broad field of possibilities. But this report principally has told us that the area originally considered is not wholly feasible and that the most likely area for irrigation shifts to the north and east.

In this northeasterly are astraddle of the James River, detailed soil analysis and detailed information and determination of facts and possibilities have not been made. Until they are made, people in town and country will not have the basis for an alltime answer whether there should be a conservancy district created or not.

It seems sound, therefore, Mr. Chairman, to provide the funds to carry along the studies needed to get the facts on which final judgment can be based.

NORTON DAM, MISSOURI RIVER BASIN PROJECT

Chairman HAYDEN. A group of resolutions favoring the construction of the Norton Dam will be included in the record.

(The resolutions referred to follow:)

RESOLUTION OF CITY OF NORTON, NORTON, KANS.

Whereas the city of Norton, Norton County, Kans., is situated on Prairie Dog Creek and has a large investment in a city park, sewage disposal plant, fairgrounds, football stadium, waterworks, and powerplant, located in the first and second bottoms of the creek that are subject to flood waters which have caused great damage in the past; and

Whereas all city water is obtained from wells in the Prairie Dog Valley and the water table in all of them has dropped alarmingly the past 3 years due to drought and increased irrigation pumping, both from the creek and from wells, and such irrigation wells are increasing in numbers all over western Kansas; and

Whereas such conditions have caused a chronic water shortage, which has caused the city to legislate against air-conditioners and other water-consuming devices and to ration water the past three summers; which shortage is endangering the health and fire protection of the city; and

Whereas the city canceled plans for a water-softening plant because the reduced flow of the creek does not guarantee the city adequate water to carry away the brine from the plant; and

Whereas additional wells have been drilled each of the last 3 years and emergency bonds have been issued to pay for the same, but the water supply continues to decrease; and

Whereas the recharge of subsurface water in a normal year in western Kansas is one-quarter of an inch, and one 1,000-gallon-per-minute irrigation well will take all of the recharge from under 640 acres of land in a day; and such being the case it is only a matter of time until the municipal water supply of all cities in western Kansas will be in jeopardy; and

Whereas the Norton Dam and Almena project were authorized in 1944, and the Bureau of Reclamation has completed its investigation and proposes that the

city of Norton enter into a contract to purchase water from the proposed dam in an amount sufficient to meet long-term projected needs and pay a proposed water charge equivalent to the cost of securing an alternative water supply of comparable quality; which the city is ready to do and contract for the same: Now, therefore, be it

Resolved by the governing body of the city of Norton, Kans., at its meeting on May 7, 1957, That they go on record as favoring the immediate construction of the Norton Dam, and, that the city attorney present a copy of this resolution to the chairmen of the Committees on Appropriations for the House of Representatives and for the United States Senate.

Approved and adopted this 7th day of May 1957.

L. J. MOREHEAD, *Mayor.*

Attest:
[SEAL]

HENRIETTA V. WILTROUT,
City Clerk.

RESOLUTION

Whereas Prairie Dog Creek has caused millions of dollars of flood damage in the past few years and poses as a constant threat to the water, light, and sewerage facilities of the city of Norton, Kans.; and

Whereas all of Norton's water wells are located near said creek, and the flow of the creek in dry weather and the water table of the land adjacent thereto has been lowered, and become so deficient, that the city of Norton faces a chronic water shortage in the future as it has the past summers when the city was almost without water on many occasions; and

Whereas there has been authorized by the Congress as a part of the Pick-Sloan plan, a dam known as the Norton Dam in the Almena project for irrigation to be constructed by the Bureau of Reclamation of the Department of the Interior; and

Whereas there is an immediate need for the construction of the same, not only for irrigation, but for flood control and for protection of the water supply of the city of Norton, the State Sanatorium of Tuberculosis and the cities of Almena, and Long Island: Now, therefore, be it

Resolved by the Lions Club of Norton, Kans., in regular meeting this 7th day of May 1957, That said construction be requested for the next fiscal year, and that a copy of this resolution be sent to the Honorable Clarence Cannon, chairman, Committee on Appropriations, House of Representatives, Washington, D. C., and the Honorable Carl Hayden, chairman, Appropriations Committee, United States Senate, and the Honorable Andrew F. Schoeppel, United States Senator from Kansas, the Honorable Frank Carlson, United States Senator from Kansas, and the Honorable Wint Smith, Member of Congress from the Sixth District of Kansas.

Passed this 7th day of May 1957.

Attest:

DALE BRUNSON, *President.*
Dr. REX KEENER, *Secretary.*

RESOLUTION

Whereas in 1944 the Congress authorized the Norton Dam and Almena project as part of the Pick-Sloan plan, and final investigation has now been completed; and

Whereas construction should not be delayed another year because of the great need for water for the city of Norton, which is increasing rather than decreasing as additional wells have been drilled and old ones cleaned and treated; and

Whereas Prairie Dog Creek has and will continue to cause millions of dollars damage to the valley with its periodic unchecked floods; and

Whereas the project is feasible and an irrigation district hearing has been held and will soon be able to contract with the Bureau of Reclamation for a repayment contract; and

Whereas such irrigation will have a stabilizing effect upon the agriculture and economy of the community: Now, therefore, be it

Resolved by the Rotary Club of Norton, Kans., this 13th day of May 1957, That the Congress be requested to assist in meeting this emergency by appropriating $1 million for fiscal year 1958, to commence the construction of Norton Dam, and that a copy of this resolution be presented to the Appropriations Committees

of the House of Representatives and the United States Senate, and the Senators from the State of Kansas, and the Congressman from this district.

Passed this 13th day of May 1957.

ROY BANKS, *President.*
Judge R. W. HEMPHILL, *Secretary.*

ALMENA CHAMBER OF COMMERCE RESOLUTION

Wheras the city of Almena, Kans., is located in the Prairie Dog Valley with Prairie Dog Creek running through the city limits with the Rock Island Railroad Station, the city water wells and water tower on the south side and the larger portion of the city on the north side, with periodic floods dividing the two; and

Whereas the Norton Dam, which was authorized by Congress in 1944, would provide flood protection for the city and neighboring farmland; and

Whereas Almena Irrigation District No. 5 contained land in the valley on both sides of the city, which when in operation will provide hay and feed grain in the years when dry land farming produces no crops for the area, and thereby stabilize the economy of our little farming community: Now, therefore, be it

Resolved by the Almena Chamber of Commerce at their monthly meeting this 13th day of May 1957. That a supplemental appropriation in the amount of $1 million be sought from the Congress of the United States to commence the construction of the Norton Dam, and that a copy of this resolution be presented to the Committees on Appropriations for the House of Representatives and the United States Senate, and to the Honorable Andrew F. Schoeppel, the Honorable Frank Carlson, and the Honorable Wint Smith.

Almena, Kans., May 13, 1957.

ROLLIN HAWKS, *President*
RAY KENT, *Secretary.*

TEXAS WATER CONSERVATION ASSOCIATION

Chairman HAYDEN. The statement of Mr. H. E. Sturrock, general manager of the Texas Water Conservation Association will be included in the record.

(The statement referred to follows:)

STATEMENT OF J. E. STURROCK, GENERAL MANAGER, TEXAS WATER CONSERVATION ASSOCIATION, AUSTIN, TEX., RE APPROPRIATIONS FOR BUREAU OF RECLAMATION FOR FISCAL YEAR ENDING JUNE 30, 1958

My name is J. E. Sturrock of Austin, Tex. I am general manager of the Texas Water Conservation Association, a statewide organization representing all major classifications of water use.

I am very pleased to appear before this committee to testify on behalf of my organization in support of appropriations for the Bureau of Reclamation for its gulf basins project investigation.

Vigorous prosecution and early completion of this investigation are of the utmost importance to the State of Texas. Until recent months, the Bureau has concentrated its efforts primarily upon assembling and studying the vast amount of basic information available from a wide variety of sources which is fundamental to orderly and intelligent appraisal of the State's water problems. The studies which have been completed to date have made a highly valuable contribution to increased understanding of these problems by the multitude of concerned interests. One of these studies is a survey showing the location and magnitude of probable future municipal and industrial water needs which must be supplied over the next 50 years if Texas is to make its fullest possible contribution to the urban and industrial economy of the Nation. This survey was made by the bureau of business research of the University of Texas for the Bureau of Reclamation. Another important contribution is a survey and report on the ground water resources of the Texas coastal region which has been completed by the Geological Survey for the Bureau. These two studies well illustrate the manner in which the Bureau is taking advantage of the special talents of various State and Federal agencies in a variety of specialized subjects, all of which must be given proper consideration in any comprehensive analysis of water problems.

Other cooperative studies now in progress include an investigation of possibilities for reuse of municipal and industrial return flows, including the streamflow pollution problems involved, by the engineering department of the University of Texas; an exhaustive survey to assemble and present basic agronomic and soils data relative to irrigation potentialities in various sections of Texas by the Texas A. & M. College Research Foundation; a study of the magnitude and future life of the ground water resources of the Texas high plains by the Geological Survey; and collection and interpretation of basic data on fish and wildlife conservation potentialities of reservoir sites which are likely to be developed to supply municipal, industrial, and irrigation water requirements. It is essential that these and other similar specialized efforts be carried through to completion, in order to assure that all aspects of our State's water problems are given thorough consideration in the future planning of water resources projects.

With its own forces, the Bureau has essentially completed a reconnaissance classification to determine the location and amount of land potentially suitable for new irrigation development; has made reconnaissance studies to establish on a preliminary basis the location and magnitude of new water supplies that can be created to supply future municipal and industrial needs and to develop fully the State's irrigation potential; has made preliminay reconnaissance-grade studies to establish the location and capacities of the reservoirs and canals which will be required for development of such water supplies.

It is a matter of vital importance to the State of Texas that adequate funds be made available to the Bureau of Reclamation for refinement and completion of these and the numerous other studies involved in its Gulf basins project investigation. When this investigation and the report thereon are completed, we will have available for the first time a truly comprehensive and realistic appraisal of the scope and magnitude of our State's water supply problems, including (1) a logical and priactical plan for development of the facilities which will be needed to solve these problems, (2) a reliable estimate of the cost of developing, operating, and maintaining such facilties, and (3) a solid, factual basis for resolution by agreement and negotiation of the host of conflicts between the various concerned local interests which have hampered our efforts.

Thus far, I have spoken primarily as a Texan and have emphasized the extremely valuable contribution which the Bureau has made toward solution of my State's water problems and which it will continue to make, if adequate funds are made available for completion of its investigations. Both my organization and I are fully aware of the wider, national aspects which it is the duty of this committee to consider. From personal contact, I know that the Bureau personnel conducting the investigation have the national interest uppermost in their minds at all times in the conduct of their studies. The national interest, as it is involved in the Gulf Basins project, is to make certain that future Federal expenditures in the field of water resource development in Texas be made so as to provide the technical and financial assistance needed for solution of water problems that are beyond State and local capabilities to conquer, where achievement of such solutions will make a positive contribution to the national economy and well-being, at a cost commensurate with the benefits created. This objective cannot be achieved in the absence of the information which the Bureau of Reclamation will obtain through completion of its Gulf Basins project investigation.

Therefore, I strongly urge that this committee approve the Bureau's request for funds for fiscal year 1958 for the Gulf Basins project investigation. My organization believes that you will thereby take another long and fully justified step toward providing both Texas and the Nation with reliable and realistic blueprint for development of our water resources in such a manner as to provide the maximum benefits therefrom to both the State and the Nation at minimum overall cost.

KANSAS PROJECTS

Chairman HAYDEN. Senator Carlson has submitted a statement concerning the Kansas projects. His statement will be included in the record.

(The statement referred to follows:)

STATEMENT BY SENATOR FRANK CARLSON

Mr. Chairman, I appreciate very much the opportunity of appearing before your committee to discuss Bureau of Reclamation projects in Kansas.

Your committee has been very considerate of our problems and we have in the last few years completed projects at Cedar Bluff, Kirwin and Webster, in addition to the Bostwick project, which is most important for irrigation and the control of water runoff in a great area in Nebraska and Kensas.

For the past several years, our State has suffered severely from droughts, and presently, we have been blessed with what might be termed as an overabundance of rainfall. Some of the streams under your jurisdiction have suffered recent floods.

I would urge your committee to vote funds for immediate planning and early commencement of work on the Norton-Almena-Prairie Dog project on the Prairie Dog Creek in Norton County, Kans. This section has just suffered from very high water and substantial flood losses. The impounding of these waters would be of great value to that area for beneficial uses for water supply, irrigation and recreation.

I would also urge that the committee include funds for further study and detailed planning for the project at Glen Elder on the Solomon River. This area has also suffered a somewhat similar situation.

I realize the problems of the committee in regard to holding down Federal expenditures. On the other hand, projects of this type actually become capital investments which return substantial dividends to our citizens.

Chairman HAYDEN. That concludes the hearing.

(Whereupon, at 11:40 a. m., Friday, June 21, 1957, the hearing was concluded.)

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